THE NATURE AND NURTURE OF MILITARY GENIUS:

DEVELOPING SENIOR STRATEGIC LEADERS

FOR THE POSTMODERN MILITARY

BY

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APPROVAL

The undersigned certify that this thesis meets master's-level standards of research, argumentation, and expression.

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ABSTRACT

The United States government increasingly uses its military to meet novel demands through activities such as humanitarian relief, nation building, and partnership capacity generation. These exigencies arise from the current political, social, and technological context, which is sometimes described as Postmodernism. The term encapsulates sundry characterizations of the "new global strategic environment" including the "information age," "the age of transparency," "the third wave of politics," "the end of history," and "the post-military society."

American national security—and consequently the safety and prosperity of the people of the United States—depend upon senior strategic leaders capable of successfully leading these organizations in such roles. Individual leadership competence stems from two sources: nature and nurture. An ideal senior strategic leader embodies what Clausewitz called a harmonious blend of intellect and temperament. The ideal nurture of such an individual educates judgment for relevant strategic puzzles of the era. Although the ideal leader and the ideal developmental model have changed little, limitations of time, space, and human cognitive capabilities prevent the attainment of the ideal and require a prioritization of experience and education in tune with the technological and sociological context of the time.

The current social, political, and technological trends portend a postmodern military structure. The postmodern military fundamentals, relations with society, and demographics differ from the past. For example, the major mission definition has changed from major combat operations to humanitarian relief, peacekeeping, nation building, and generating partnership capacity. Furthermore, the military and society are increasingly permeable; and demographic changes include greater acceptance of women in combat roles, among others. Technological developments such as the Internet contribute to such changes.

To develop senior strategic leaders for such an environment, the United States must improve upon the nature and nurture of potential leaders. The government must take the following key steps to strengthen national security leadership: invest in education, exploit technology, and adjust the personnel system to promote critical thinking. Even in the light of postmodernism and the putative decline of the state, efforts to bolster the United States' political might still promise to serve the interests of its people.

CONTENTS

Introduction

Background

Fifty years ago the United States faced an existential threat embodied in the nuclear armed, intercontinental ballistic missile capable Soviet Union. The threat was clear: a military juggernaut, the ultimate manifestation of force of arms, created the potential for a state-on-state holocaust. The military's mission was simple: to organize, train, and equip for maximum destruction in a conventional nuclear conflict. Society developed to meet the threat: President Eisenhower oversaw the birth of a massive technocracy that harnessed the traditionally self-determined labor of Americans and applied it to a Military-Industrial Complex to counter the great "Red Menace."

Likewise, the twenty-first century United States faces a threat that some consider existential.[1] However, the threat is asymmetric and amorphous, embodied—if at all—in categories from "global terrorism to ethnic conflicts, to rogue nations and rising powers."[2] The military mission has evolved to meet the ill-defined threat: to develop partnerships, establish democracies, and provide humanitarian relief around the globe. The men and women who perform this mission include civilian contractors at home and abroad. To meet its objectives, the Department of Defense deliberately shifts funds to the Department of State through a novel mechanism: Section 1207 of the 2006 National Defense Authorization Act.

The United States military has changed since the end of the Cold War in numerous ways, including a revised major mission definition, a drastically altered relationship between the military and the media, a diminution of differences between combat and support roles, and an increased permeability between the military and society. Charles Moskos coalesced these differences, among others, under the heading *Postmodern Military* in an attempt to explain and anticipate key changes in military organization and civil-military relations.[3] Within the changing political, social, and

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[1] Patrick Thibodeau, "Cyberattacks an Existential Threat to U.S., FBI says," *Computerworld Security*, 24 March 2010, 1.
[2] House, *Robert M. Gates Testimony Before the House Armed Services Committee*, 15 April 2008.
[3] Charles C. Moskos, John Allen Williams, and David R. Segal, *The Postmodern Military* (Oxford: Oxford University Press, 2000), 6.

technological environment that shapes such changes, the United States must develop senior strategic leaders. To develop highly effective leaders for the postmodern military requires an understanding of both the nature and the nurture of strategic leadership.

This paper will outline the nature and nurture of senior strategic leadership for the United States military within the postmodern context. Beginning with the nature of a hypothetical ideal senior leader, combined with a theoretical ideal model of how to nurture leadership, the paper will outline contextual limitations on the ideal and then synthesize the ideal with reality.

Two interacting components determine a person's ability to lead within a particular context: *nature* and *nurture*. Humans have long recognized the heritable *nature* of leadership talent and ability, and an understanding of modern genetics has scarcely altered that recognition. From the earliest days of standing armies, monarchs organized their forces in a manner that acknowledged the potential abilities of soldiers based upon their familial heritage. French Bourbon kings, for example, found the descendants of feudal nobility to be a natural source of men for their officer corps.[4] Today, the United States military offers the children of career military personnel presidential nominations to the service academies but does not sanction a familial level of talent in allocating those nominations. Interestingly, service members' children who are offered a presidential nomination need not be the genetic descendants of those parents. In a nod to the importance of nurture, children who are adopted before their 15th birthday retain the same eligibility for the presidential nomination as do the offspring of a career service member.

An officer's experience and education *nurture* potential leadership ability. Fittingly, the particular course of professional development has changed with society over time. For example, in feudal society professional leadership development consisted of apprenticeship as a page and then squire to a knight. Gonsalvo de Cordoba, Charles V's "Great Captain," taught two generations of military leaders through apprenticeship.[5] Social and technological changes—like the rise of the nation-state and the increasing importance of artillery in warfare—drove military professional development toward

[4] Richard A. Preston, "Perspectives in the History of Military Education and Professionalism" (*The Harmon Memorial Lectures in Military History.* US Air Force Academy, CO, 1980)
[5] Preston, "Perspectives in the History of Military Education and Professionalism."

increased technical education. Specifically, with artillery came an increased necessity for mathematical expertise. In response, professional development models in France began to incorporate advanced technical schools such as the École du Corps Royal du Génie at Mézières and the La Fère artillery school, and the new École Royale Militaire intentionally stressed mathematics over rhetoric.[6] Such structural adaptations provided the system that nurtured Napoleon Bonaparte, a 1785 graduate of the École Royale Militaire. Similarly, contextual changes in the twenty-first century demand structural adaptation.

One of those changes to which senior military leadership must adapt is the altered relationship between the armed forces and society wrought by social media. For example, a twenty-first century military leader must account for its ubiquity in strategic calculations. A contemporary leader who decides to destroy a village in order to save it—reminiscent of the U.S. Army's actions at Bến Tre in 1968—faces the consequences of streaming real-time video documentation.[7] The changing relationship between the media and the military necessarily influences a military commander's decision-making calculus. Likewise, many more changes influence a senior leader's decisions.

Together with social tradition, the military professional development structure helps determine the relative importance of nature and nurture. For instance, the Prussian cabinet order of 6 August 1808 that required officer selection and promotion to be based upon knowledge and education instead of aristocratic birth tilted the balance toward nurture over nature.[8] However, despite the declaration, the Prussian military resisted the declining importance of aristocratic heritage and continued to favor the nobility in awarding commissions.[9] Likewise, in the present environment any structural changes to the United States military's professional development model will meet societal inertia. Such a phenomenon is evident in the glacial pace at which many PME recommendations have been taken up and acted upon. For example, Congressman Ike Skelton has

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[6] David D. Bien, "Military Education in Eighteenth Century France: Technical and Non-technical Determinants," in *Science, Technology and Warfare: Proceedings of the Third Military History Symposium*, eds. Monte D. Wright and Lawrence J. Paszek (Colorado Springs: U.S. Air Force Academy, 1969), 53.
[7] Campbell Craig, *Destroying the Village: Eisenhower and Thermonuclear War* (New York: Columbia University Press, 1998).
[8] Preston, "Perspectives in the History of Military Education and Professionalism."
[9] Preston, "Perspectives in the History of Military Education and Professionalism."

proposed renovations for decades, and some commentators refer to the hearings he's been calling for the last five years as the "latest round" of attempts to improve the system.[10]

The central argument of this thesis is that the ideal military leadership development model remains constant over time; but the limitations of time and space require the prioritization of experiences relevant to the political, social, and technological factors of the period. For example, a budding senior leader in 1785 required the same breadth and depth of experience as one in 1600, but artillery and mass conscription—novel technological and social contextual elements—thrust mathematical expertise toward the top of the list of important skills to nurture. Today, even after the end of the Cold War, the nature of warfare has not changed. A nascent senior military leader still requires the same breadth and depth of experience as Napoleon. However, social media and the increased incidence of military humanitarian relief efforts—to cite just two novel contextual elements in the postmodern era—propel communication skills and non-kinetic critical thinking to near the top of the list of important competencies.

Although this argument highlights a distinction between the postmodern military and the Cold War military, the division is primarily one of proximity. It would be just as profitable to contrast the postmodern military with the Roman legions of 500 B.C. or the *condottiere* of 1400 A.D., save for the freshness of recollection today's reader can call upon to evaluate social, political, and technological changes from the late 20th century. In other words, it is easier to assess what's changed in the last few decades than to characterize centuries of change.

Significance

If the ideal leadership development model has not changed over time, the question remains: how can the United States best develop senior strategic leaders for the postmodern military? An answer to the question must consider both the nature and the nurture of strategic leadership within the current and forecast political, social, and technological context. This research provides a theoretical framework within which to view proposed changes to professional military education.

[10] Robert H. Scales, "Return of the Jedi," *Armed Forces Journal*, 2009, 1.

As retired Major General Robert Scales stated in the October 2009 *Armed Forces Journal*, "It's that time again…[for the] military services to attempt to reform how they educate officers."[11] Furthermore, the Defense Science Board will begin a study on military education reform soon. Additionally, the House Armed Services Committee recently examined military education with an eye to future reform. The ongoing discussions invite a focused look into the nature and nurture of the development of senior strategic leadership.

This thesis marries a proposed ideal developmental model with a theoretical social construct to arrive at proposals for changes to the PME model, specifically as they relate to senior strategic leadership development.

Methodology and Structure

This research is presented in a dialectical manner, moving from the theoretical ideal to the practical. Chapter 1 offers a description of the ideal senior strategic leader, using Clausewitz's definition of military genius as a touchstone. First, the concept of "senior strategic leader" within the United States military is defined. Second, the ideal senior strategic leader is postulated. Third, the hypothetical ideal developmental model is presented.

Drawing from the ideal to reality, Chapter 2 discusses limitations on the ideal in the postmodern context. The first section gives a general overview of postmodern theory. The second section describes specific aspects of postmodern military theory, and the third section provides examples of changes within the United States military that portend a postmodern organizational structure.

Chapter 3 synthesizes the theoretical ideal within the postmodern context. In light of the postmodern military theory, this chapter posits adaptations to the current force development model. The first section ties the postmodern context to aspects of the ideal senior strategic leader postulated in Chapter 1. The second section focuses on the *nature* of postmodern strategic leadership and proposes changes to the method of selecting who merits special development. The third section focuses on the *nurture* of postmodern strategic leadership and recommends adaptations to the force development model. Each

[11] Scales, "Return of the Jedi" 1.

of the proposals includes a brief discussion of both the benefits and drawbacks of the suggested modification.

The concluding chapter summarizes the arguments of the main body and points to the voluminous amount of work yet to be accomplished for PME to be harmonized with the postmodern era.

Chapter 1

Developing the Ideal Senior Strategic Leader

> *It is true that we normally regard the plain, efficient soldier as the very opposite of the contemplative scholar, or of the inventive intellectual with his dazzling range of knowledge. This antithesis is not entirely unrealistic; but it does not prove that courage alone will make an efficient soldier, or that having brains and using them is not a necessary part of being a good fighting man.*
>
> -- *Carl von Clausewitz*

What is a Senior Strategic Leader?

The term strategic leader encompasses two primary components: strategist and leader. A strategist attempts to solve problems, and a leader marshals and commands resources for a purpose. The strategic leader directs a variety of resources toward potential solutions. Based on this definition, however, every living thing in the universe qualifies as a strategic leader. The amoeba, for example, attempts to solve an osmotic imbalance by directing hyaline vacuoles to alter the rate of fluid elimination from the cell. Therefore, the definition must be scoped and refined to be of any use.

Two alterations to the term allow a useful analysis of senior strategic leadership development in the United States military. The first modification restricts the scope to military leadership. However, even within this arena strategic leaders range from basic trainees to the Commander-in-Chief, all of whom direct resources to potential solutions. Because the development of a basic trainee differs widely from the development of a Unified Combatant Commander, such a definition is not useful for the purpose of describing strategic leadership development. Therefore, the second modification appends the prefix "senior," further restricting discussion to a high level of analysis.

A *senior strategic leader* in the United States military is an individual entrusted with the responsibility to solve national security challenges at the strategic and grand-strategic levels. In the military sphere, levels of analysis range from tactical at the low end, to grand-strategic at the high end. Clausewitz defined tactics as the theory of the use of armed forces in battle, strategy as the theory of using battle for the purposes of the

war.[1] Liddell Hart refined Clausewitz's definition of strategy to include the art of distributing and applying military means to fulfill the ends of policy, and defined grand-strategy as a higher strategy of coordination and direction of all resources of a nation or coalition towards the attainment of a political object.[2] The senior strategic leader practices strategy and grand-strategy simultaneously. Two brief historical examples illustrate the concept of senior strategic leadership in the United States military: General Lucius Clay and President Dwight Eisenhower.

General Lucius Clay exercised strategy as the United States Military Governor of Germany after World War II. Clay strategically responded to Russia's blockade of Berlin by asking the Air Force to airlift supplies into the city as a bid for time lest the civilian leadership in Washington write Berlin off.[3] Clay's bid for time transitioned into a grand-strategic solution to the Russian blockade and the greater threat of war with Russia.

In a second example of senior strategic leadership, President Dwight D. Eisenhower served as Commander-in-Chief during the maturation of Intercontinental Ballistic Missile (ICBM) technology. During his two terms in office, his administration marshaled national resources to avoid the thermonuclear holocaust that would have resulted from war with the Soviet Union. His grand strategy included an overall reduction in defense spending with prioritized investment in nuclear ICBMs for their massive deterrent effect, coupled with strategic ambiguity regarding the use of nuclear weapons. He responded to crises—such as Communist China's attack on the Nationalist islands of Quemoy and Matsu—with war-evading diplomacy interwoven with provocative signals to the Soviet Union. For example, he compared the Chinese action against the islands to Hitler's aggression in the 1930s but struck a deal to demilitarize the islands if China stopped shelling them.[4] Clearly, Eisenhower served as a senior strategic leader for the United States military. However, the military has no customary role in developing the President of the United States' strategic leadership; the people get the inherent leadership attributes of the person they elect.

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[1] Peter Paret, *Makers of Modern Strategy* (Princeton: Princeton University Press, 1984), 190.
[2] B.H. Liddell Hart, *Strategy* (London: Meridian, 1954), 322.
[3] Andrei Cherny. *The Candy Bombers* (New York: Berkeley Caliber, 2008), 252.
[4] Campbell Craig, *Destroying the Village* (New York: Columbia University Press, 1998), 87.

Today, individuals who occupy strategic or grand-strategic command positions serve as senior strategic leaders. For example, the Commander-in-Chief as well as all Unified Combatant Commanders shoulder the responsibility to solve national security problems. Furthermore, the government entrusts each of these commanders with vast resources in manpower and materiel. Stepping away from specific historical examples of senior strategic leadership and into the realm of theory, the next section posits the hypothetical ideal senior strategic leader.

The Ideal Senior Strategic Leader

Carl von Clausewitz's description of *military genius* forms an excellent starting point from which to postulate the ideal senior strategic leader. Clausewitz's *On War* describes warfare using a dialectic approach in which he started with a theoretical definition of war and subsequently bounded the ideal with reality. Following his definition of war, Clausewitz expressed the concept of military genius, a category of men into which he fit only three individuals: Alexander the Great, Frederick the Great and Napoleon Bonaparte. This paper uses Clausewitz's dialectic approach, starting with a definition of ideal senior strategic leadership before applying the bounds of reality.

According to Clausewitz, military genius is a "harmonious blend of intellect and temperament."[5] In the Clausewitzian paradoxical trinity of war—consisting of violence, chance, and reason—the intellect is required to mitigate uncertainty, or chance. Intellectual capability enables understanding and planning, in addition to the ability to imagine or intuit to fill gaps in information during the milieu of war.[6] The right temperament embodies courage in the face of danger and the determination to accept responsibility for the actions a leader decides to take.

The ideal senior strategic leader possesses an unlimited ability to understand and plan. A person of such theoretical intellect understands the implications and ramifications of every action and order and comprehends in every detail the operations of the resources at his command. Aside from a complete understanding of the cause and effect relationship between operations and subsequent events, the unlimited intellect assimilates all of this knowledge into a systematic pattern for the purpose of decision-

[5] Carl Clausewitz, *On War* (Princeton: Princeton University Press, 1984), 100.
[6] Clausewitz, 89.

making. Congressman Ike Skelton articulated this need for systematic strategic thinking in his 1989 *Report of the Panel on Military Education*, when he noted that "strategic thinking requires the connection of diverse but interrelated issues into a systematic pattern."[7] This strategic thinking must be not just systematic, but also expeditious, as information in warfare obviates old plans and requires the formulation and implementation of new plans on short order.

Furthermore, the ideal senior strategic leader can imagine or intuit infinitely to fill gaps in information.[8] Clausewitz described this intuitive component of intellect as *coup d'oeil*, a retention—even in the darkest hour—of some glimmerings of the inner light which leads to truth.[9] Intuition, imagination, and creativity are integral to leadership. Some researchers ascribe more weight to this aspect of decision-making under pressure than to the systematic comparison of potential plans.[10] In sum, the theoretical intellectually ideal senior strategic leader understands all known factors, and can imagine or intuit to create an accurate understanding of all unknown factors.

Regarding temperament, Clausewitz employs descriptors such as self control, balanced emotion, firmness, staunchness, and strength of character.[11] He expressly highlights the concept of courage. He divides courage into two categories: courage in the face of danger, and courage to accept responsibility for actions and decisions. Courage in the face of danger, the ability to act or maintain composure under duress, can be either permanent or non-permanent. Permanent courage in the face of danger stems from an indifference to danger, whereas the non-permanent form of courage arises from a temporary emotional state.[12] Clausewitz uses the term *determination* to describe the cast of mind that employs courage to accept responsibility.[13] He links this type of temperament directly to the intellect, stating that determination is a quality of temperament that can only be aroused by the intellect. Therefore, the ideal senior

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[7] Ike Skelton, *Report of the Panel on Military Education of the One-Hundredth Congress of the House of Representatives Committee on Armed Services,* (Washington, D.C.: U.S. Government Printing Office, April 21, 1989), 24.
[8] Clausewitz, *On War*, 109.
[9] Clausewitz, *On War*, 102.
[10] Gary Klein, *Sources of Power: How People Make Decisions* (Cambridge, Mass.: MIT Press, 1998), 99.
[11] Clausewitz, *On War*, 112.
[12] Clausewitz, *On War*, 101.
[13] Clausewitz, *On War*, 103.

strategic leader possesses a courageous temperament in the face of danger, an unlimited intellect capable of awakening the courage to act and accept responsibility for those actions, and the ability to instill courage in subordinates.

Furthermore, the ideal senior strategic leader is immune to human cognitive deficiencies. Consistent with the ideas of Robert Jervis, the five principal cognitive deficiencies are: irrational consistency, assimilation of information to pre-existing beliefs, premature cognitive closure, the need to create a narrative, and discomfort with cognitive dissonance.[14]

Jervis describes cognitive consistency as the tendency for people to fit information into a consistent pattern based on past experience.[15] Cognitive consistency itself is not necessarily a weakness; human cognition requires assimilation of information into a context to produce understanding. However, Jervis subdivides consistency into rational and irrational categories. Rational consistency follows the rules of drawing inferences, whereas irrational consistency violates the scientific method.[16] Examples of rational consistency include the *halo effect* and the *kiss of death*. The halo effect is the influence of judgments about someone's positive attributes on beliefs about other aspects of that person.[17] For instance, someone judged to be clear-thinking might rationally be assumed to be a clear writer. This cognitive consistency is rational if the person drawing inferences has evidence that clear-thinking is linked to clear writing. Similarly, the "kiss of death" is a rational deduction that someone who earns a positive judgment from a distrusted entity is untrustworthy himself. Jervis groups such consistency under the descriptor *cognitive-affective balance*, in which favorable characteristics are attributed to liked nations, and unfavorable characteristics to disliked nations.[18] Another example of rational consistency is what Jervis calls *source-message interaction*. This form of consistency judges the truthfulness of information based upon the credibility of the source.[19]

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[14] Robert Jervis, *Perception and Misperception in International Politics* (Princeton: Princeton University Press, 1976), 117.
[15] Jervis, *Perception and Misperception in International Politics*, 117.
[16] Jervis, *Perception and Misperception in International Politics*, 119.
[17] Jervis, *Perception and Misperception in International Politics*, 120.
[18] Jervis, *Perception and Misperception in International Politics*, 121.
[19] Jervis, *Perception and Misperception in International Politics*, 122.

Irrational consistency, on the other hand, is a distinct cognitive deficiency. The term "overkill" is useful in understanding irrational consistency. Overkill describes the tendency for a person who favors one policy to assume—in the absence of empirical evidence—that the policy contributes to several independent values. For example, Jervis points out that people who favored a nuclear test ban believed that testing created a medical danger, would not lead to weapons improvements, and caused international tension; those who opposed the ban disagreed on all three issues.[20] Kristin Lord, director of studies at the Center for a New American Security, ascribes the cognitive consistency phenomenon to the aggregation of preferences to form in-groups and out-groups, a cognitive shortcut that allows people to avoid value trade-offs by assimilating only the information presented by sources that they like, regardless of the rationality of the independent deductions contained in those conclusions.[21]

The ideal senior strategic leader distinguishes between rational and irrational cognitive consistency. In any situation in which it is possible to separate the influence of a particular policy on independent values, the ideal leader does so. Furthermore, this leader recognizes the need to compromise between values to achieve the most effective overall decision or action.

Second, in addition to a tendency to strive for cognitive consistency, people see what they expect to see, and fit information into pre-existing beliefs.[22] Such assimilation, when presented with information contrary to pre-existing beliefs, leads directly to *four cognitive evils*: the tendency to *not see* discrepant information, to *reject* its validity, to *discredit* the source, or admit *puzzlement* and move on.[23]

Due to the influence that pre-existing beliefs exercise over cognition, does the ideal senior strategic leader have to possess an absence of pre-existing beliefs? No; in fact, pre-existing beliefs are essential to understanding, a condition Jervis describes as the *necessary interdependence between facts and theories*.[24] In light of this necessary interdependence, the ideal leader is surrounded by people who have different pre-existing

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[20] Jervis, *Perception and Misperception in International Politics,* 129.
[21] Kristin M. Lord, *The Perils and Promise of Global Transparency: Why the Information Revolution May not Lead to Security, Democracy, or Peace* (Albany: State University of New York, 2006), 53.
[22] Jervis, *Perception and Misperception in International Politics*, 143.
[23] Jervis, *Perception and Misperception in International Politics,* 291.
[24] Jervis, *Perception and Misperception in International Politics,* 154, 156.

beliefs. These people maintain the ability to see and assimilate information that even the ideal human leader cannot see. At a minimum, the ideal leader recognizes that pre-conceptions influence perceptions, and becomes consciously vigilant for the four cognitive evils.

Third, Jervis describes the process of premature cognitive closure, in which a decision-maker selects an available course of action, after which point new information is more easily discarded.[25] Once a belief takes hold, new information—if it is not discarded—has less influence than it previously would have had. Furthermore, leaders who have decided to take a particular course of action assimilate ambiguous, or even discrepant, information with greater confidence than before cognitive closure. For example, Admiral Kimmel, the commander at Pearl Harbor in 1941, confidently assimilated new information about a potential Japanese attack into his schema that had already concluded the Japanese were about to attack somewhere in Southeast Asia.[26] The ideal leader must decide on a course of action at some point, so to avoid cognitive closure altogether is impossible. However, the ideal leader must retain an advisor who remains undecided or who prefers a different course of action, so as to assimilate new information with the same level of influence as before cognitive closure.

A fourth cognitive deficiency is the need to create a narrative to explain events. Nicholas Taleb attributes this imperfection to the difficulty in acquiring, storing, and retrieving information in the human brain.[27] Philosopher Pierre Daniel Huet noted that any event has an infinite number of causes, and a simple narrative explanation of events reduces the number of causes from infinity to something more manageable. Taleb describes the process of reducing an event from its infinite number of factors to only a few memorable ingredients as rationalization, which he claims is as natural to the human mind as breathing. To avoid rationalization takes conscious effort. The ideal leader possesses an intellect so powerful that the need to create a narrative to understand the past is abrogated; all possible causes become known and retrievable.

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[25] Jervis, *Perception and Misperception in International Politics*, 188.
[26] Jervis, *Perception and Misperception in International Politics*, 194.
[27] Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable* (New York: Random House, 2007), 68.

The fifth cognitive fault that the ideal leader overcomes is discomfort with cognitive dissonance. Cognitive dissonance theory is based on the premise that people seek strong justification for their behavior.[28] This desire for strong justification leads people to rearrange their beliefs to provide greater support for their actions. For example, prior to deciding on a particular course of action, an individual must process dissonant information and achieve some compromise judgment with respect to existing cognitions. However, once a decision is made, the individual seeks to minimize internal conflict by rearranging his beliefs to reduce the extent to which evidence supported a different course of action. One very important implication of cognitive dissonance theory is the *boomerang effect*, the tendency for an individual to hold a belief even more strongly when presented contradictory evidence after a decision has been taken. This aspect of dissonance theory holds great importance because the behavior it predicts directly opposes that predicted by learning theories.[29] The ideal strategic leader, then, seeks not to reduce internal conflict after coming to a decision, but rather only to come to the best possible decision at the time. In this regard, the ideal strategic leader is marked by a great deal of humility.

Following such a postulated ideal senior strategic leader—possessing an unbounded intellect and perfect temperament, while being immune to the five primary cognitive deficiencies—the discussion turns to the theoretical development of the ideal.

Development of the Ideal Senior Strategic Leader

Ignoring the limitations on human development imposed by the confines of time and space, a nation can develop ideal senior strategic leaders through a manipulation of nature and nurture. That is, the government could immediately create a large pool of potential military geniuses and then nurture the individuals in that pool through infinite education and experience. This section investigates the ideal talent pool and the ideal development of the individuals in that pool.

Clausewitz pointed to two factors regarding the incidence of military genius, quality and quantity. He posited that the quality of military genius increases with higher

[28] Jervis, *Perception and Misperception in International Politics,* 382.
[29] Jervis, *Perception and Misperception in International Politics,* 404.

general intellectual development of a given society.[30] To that end he claims that the Romans and the French, at their societal peak, produced the most brilliant soldiers of their time. On the other hand, he contends that a primitive, warlike race is incapable of developing military genius because the degree of intellectual capability is unattainable among savages.[31] Regarding quantity, Clausewitz held that the smaller the range of nation's activities and the more the military factor dominates, the greater will be the incidence of military genius.[32] The implication for the theoretical development of the ideal senior strategic leader is simple and clear—to develop a large pool of high-quality individuals the nation must limit its range of activities and promote general intellectual development among the populace. Assuming a high level of general intellectual development, the nation must still select the highest quality individuals from that population.

Recognition of individuals with the greatest potential has always been a subjective enterprise. Clausewitz suggested that a potential military genius could be recognized for his calm, inquiring mind—rather than an excitable and creative one.[33] Furthermore, a comprehensive educational approach—rather than a specialized approach—promised to nurture the potential military genius to fruition. Nearly 200 years later, little has changed in this subjective assessment of potential.

Despite breakthroughs in biological science, such as Watson and Crick's 1953 description of the double-helix structure of DNA that provided a motor to explain Darwin's theoretical model of genetic inheritance, the recognition of individuals with great potential remains subjective. Scientists have furthered understanding of the genetics of intelligence and temperament in the past 50 years; they have decoded the entire human genome and linked various phenotypic traits to genotypic precursors. Nonetheless, decades of study have not brought an end to the nature versus nurture debate but have resulted in the recognition that genetics and the environment play a complex interactive role in developing cognitive and behavioral traits.[34] The fact that

[30] Clausewitz, *On War*, 100.
[31] Clausewitz, *On War*, 100.
[32] Clausewitz, *On War*, 100.
[33] Clausewitz, *On War*, 100.
[34] Hans Eysenck, *Genius: The Natural History of Creativity* (Cambridge: Cambridge University Press, 1994), 16.

talent tends to cluster within families stems from environmental influences and from the complex multivariate genotypic pattern of inheritance. As a result, the recognition of potential military genius today holds little more accuracy than was the case in 1830. Thus, the nature of potential military genius remains a subjective interpretation of observed cognitive and behavioral traits.

Until a precise realization of the protein-coding genetic pathways that predispose an individual to military genius—an unlikely scientific find, given the complexity of such multivariate traits—a military must rely on subjective measures of potential. In the ideal model, the pool of talented individuals is infinite, and the nation nurtures each of these individuals through infinite experience and education.

Education and experience form the nurture part of the "nature and nurture" equation. To simplify, education is a subset of experience; it is a specialized form of experience designed to facilitate learning. Learning—empirically defined as a relatively permanent change in behavior which occurs as a function of practice—can take place through any experience.[35] Saltz differentiates between two types of learning: learning for retention and learning for problem solving. The first, learning for retention, describes *training* in the military parlance. The second type of learning portrays *education*, and implies the ability to *discover* a response that will permit goal achievement.[36] Learning for problem solving, the second type of learning, is critical for the strategist; it requires critical analysis and thought and is considered a transfer task that requires the use of products of prior experience in a new stimulus situation.[37] The ideal development of the strategic leader, then, subjects the talented individual to an ideal education.

An ideal education is based on a prescriptive theory of instruction drawn from a descriptive theory of the learning process.[38] Such an education is untenable today, even theoretically, because of a lack of a unified theory of learning. Although neuroscience and psychology have produced many theories of learning on many different levels—from individual neurons to groups of people—no satisfactory unified theory exists.[39] Instead,

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[35] Eli Saltz, *The Cognitive Bases of Human Learning* (Homewood, IL: The Dorsey Press, 1971), 5.
[36] Saltz, *Cognitive Bases of Human Learning*, 11.
[37] Saltz, *Cognitive Bases of Human Learning*, 12.
[38] Peter Gärdenfors and Peter Johansson, *Cognition, Education, and Communication Technology* (Mahwah, NJ: Lawrence Erlbaum Associates, Inc., 2005), 2.
[39] Gärdenfors, Johansson, *Cognition, Education, and Communication Technology*, 2.

fragmented theories form the basis of pedagogical recommendations, ranging from Skinner's behaviorism to Piaget's constructivism.[40] However, most of these theories inform the educator how to teach for retention instead of problem solving, but the strategist's education must improve the ability to think and solve problems.

Short of a theory regarding how people learn, a theory that describes how people think and solve problems forms the basis of the senior strategic leader's education. Unfortunately, no unified theory of problem solving exists either.[41] One prominent theory that seeks to elucidate methods of thought and problem solving is Newell and Simon's *search* model.[42] Newell and Simon's theory of problem solving is based upon heuristics.[43] The steps in problem solving, according to this model, are to define the problem space, search among a variety of memorized schemata, and apply them to circumvent limitations at any point within the represented problem space.[44] The problem space is a major invariant of problem solving; *i.e.*, all human problem solving occurs in some problem space.[45] Drawing from Newell and Simon's model of problem solving, the ideal education maximizes an individual's schemata base, search effectiveness and deductive reasoning skills.

This theory of problem solving does not address the *rate* of cognitive processes, and strategists must often make decisions quickly based on limited time for introspection or deductive reasoning. Two concepts refine problem solving theory with respect to time: Boyd's Observe-Orient-Decide-Act (OODA) Loop, and intuition. Boyd's OODA Loop describes a process that takes place during command of military operations.[46] The steps in the loop include: *observation* of the problem; *orientation* with respect to the problem, the individuals genetic makeup and previous experiences; *decision*; and *action*. According to Boyd, the most important part of the OODA Loop is the second "O" –

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[40] Gärdenfors, Johansson, *Cognition, Education, and Communication Technology*, 4.
[41] Kurt VanLehn, *Problem Solving and Cognitive Skill Acquisition* (Cambridge, Mass: MIT Press, 1989), 529.
[42] Herbert A.Simon and Craig A. Kaplan, *Foundations of Cognitive Science* (Cambridge, Mass: MIT Press, 1989), 14.
[43] Simon, Kaplan, *Foundations of Cognitive Science*, 20.
[44] Earl Hunt, "Problem Solving," in *Thinking and Problem Solving*, ed. Robert J. Sternberg (San Diego: Academic Press, 1994), 231.
[45] Allen Newell and Herbert A. Simon, *Human Problem Solving* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 1972), 789.
[46] John R. Boyd, *Organic Design for Command and Control* (Atlanta: Defense and the National Interest, 2005), 26.

orientation, which shapes the way people interact with their environment, and thus shapes the rest of the OODA Loop. Ideally, an individual minimizes the time required to complete the OODA loop in order to improve the capacity for independent action—Boyd's postulated basic aim of life.

To minimize the time required to make effective decisions, strategic leaders use their intuition. As such, the ideal education of a senior strategic leader strengthens not only his introspective and reasoning faculties, but also his intuition. Intuition, the instinctive ability to act intelligently, stems from non-conscious learning over a long, rigorous, and broad course of education and experience.[47,48] To develop an intuition for chess, the chess master plays for many years and reflects upon decisions made over the course of play. Napoleon developed intuition for battlefield maneuver through introspection over time. Likewise, the ideal senior strategic leader must practice strategic decision making over many years and reflect upon those decisions. The types of strategic decisions must reflect those that the leader will be called upon to make in future endeavors. As Pasteur noted, "chance favors only the prepared mind." Because the nature of future strategic decisions remains unknown, the ideal development model includes a rigorous education and experience in every discipline imaginable.[49] As Congressman Ike Skelton put it, "Given the potential influence of many different subject areas on strategic thinking—trends in political, technological, economic, scientific, and social issues, both domestic and international—strategists must have the broadest possible educational base."[50]

In addition to a broad interdisciplinary education, every senior strategic leader requires the capacity to make decisions under stress. The ideal senior strategic leader's aptitude for such decision making must be educated in every possible avenue. For example, experiences as a securities trader on Wall Street, an emergency room physician, or a head coach for a national-championship football team create opportunities to discover effective means of decision making under stress. It is not important for the developing senior strategic leader to gain intuition for securities trading, surgery, or

[47] David G. Myers, *Intuition: Its Powers and Perils* (New Haven: Yale University Press, 2002), 52.
[48] Malcolm Gladwell, *Blink* (New York: Little, Brown and Company, 2005), 259.
[49] Unless, of course, the nation follows Clausewitz's guidance to limit its range of activities, in which case the nation need only educate the strategist in the range of activities in which it is involved.
[50] Skelton, *Report of the Panel on Military Education,* 27.

football; rather, the leader must hone the ability to make decisions under various forms of stress: financial risk, health risk, and the risk of glory or defeat. To induce the component of stress, the individual developing the decision-making capability must feel true responsibility for his decisions.

Even if the ideal developmental model educates the leader's reason and intuition in every discipline, not every strategic solution will arise from reasoned thought or intuition. Indeed, some measure of creativity marks the most effective senior strategic leaders. Even while following a fruitless heuristic search for a solution to a strategic problem, the senior strategic leader must still decide how to proceed. Creativity broadens the aperture of the search for possible solutions. General Clay's airlift solution to the Berlin crisis provides an example of creative thought leading to a solution of a strategic problem. To enhance the ideal senior strategic leader's creativity, Sternberg and Lubart suggest promoting its source attributes including intellectual ability, knowledge, and intrinsic motivation.[51]

Finally, the ideal senior strategic leader learns systematically to determine when each process—thought, search, deduction, intuition, and creativity—is most conducive to an acceptable solution to a strategic problem. Gladwell proposes the use of intuition over analysis in more complex problems, but the ideal development of a senior strategic leader allows each decision maker to determine under what conditions each process is most advantageous in a given situation.[52]

The above discussion describes *what* the ideal senior strategic leader must learn—how to think, search, deduce, intuit, and create solutions—it does not describe *how* decision makers learn from experience, nor *from* what experiences people learn. Obviously, the ideal developmental model nurtures potential strategic leadership through experiences from which they *do* learn. Jervis provides a meaningful discourse of the "how" and "from what" aspects of learning in *Perception and Misperception in International Politics*.

Jervis focuses on how people learn from experience. First, such learning is rarely scientific. It tends to be superficial, overgeneralized, and based on *post hoc ergo propter*

[51] Todd Lubart, "Creativity," in ed. Robert J. Sternberg, *Thinking and Problem Solving* (San Diego: Academic Press, 1994), 309-333.
[52] Gladwell, *Blink*, 267-8.

hoc reasoning.[53] That is, decision-makers search for conspicuous circumstances to which they assign causality for an event's short term outcome, without examining the supposed links. Furthermore, outcomes are categorized as either a "success" or "failure," and leave little room for nuance and context.[54] All of these learning deficiencies point to the need for post-decision critical analysis. Unfortunately, the conditions of learning usually occur under "high-drive" surroundings. "High-drive" describes situations in which the individual seeks to achieve goal attainment in a limited amount of time, with time for reflection and introspection limited. After a "high-drive" event, the decision-maker wastes little time analyzing whether their lessons learned were correct and often moves on to the next critical decision.[55] The ideal developmental model for a senior strategic leader provides time critically to assess the lessons drawn from experience and to apply them theoretically to other experiential situations for verification.

If the ideal model ameliorates the unscientific method of *how* people learn, it must also incorporate experiences *from* which people learn. Jervis describes four types of experience from which an individual learns most: firsthand experiences, experiences that occur early in adult life, experiences bearing important consequences for the individual or the nation, and experiences accompanied by only a narrow range of available alternative analogies.[56] In support of Jervis' theory, General Colin Powell recalls a lesson he learned from his first assignment in the army. After losing his pistol, Powell informed his commanding officer, who pretended to have recovered it from a group of children. The commanding officer's story scared Powell, but he was most impressed with the informal way his commander had given him a second chance. Powell noted in his autobiography, "Miller's example of humane leadership that does not always go by the book was not lost on me."[57] After a 35-year career that took Powell to the pinnacle of uniformed officership, this first-hand lesson from an early age stuck with him. An ideal developmental model, then, presents the potential strategic leader with an infinite number of consequential first-hand experiences, clustered simultaneously at early adulthood, with time to allow critical analysis of the lessons drawn. Such a model, however, retains a

[53] Jervis, *Perception and Misperception in International Politics*, 228.
[54] Jervis, *Perception and Misperception in International Politics*, 232.
[55] Jervis, *Perception and Misperception in International Politics*, 237.
[56] Jervis, *Perception and Misperception in International Politics*, 239.
[57] Colin Powell, *My American Journey: An Autobiography* (New York: Random House. 1995), 47.

deficiency in that people learn from what happens to them and to those with whom they identify.[58] Ideally, this learning deficiency—insufficient attention to outside groups and cultures—can be removed by complete cultural immersion such that the decision-maker identifies with every group and culture in the world.

Has the Ideal Changed Over Time?

The ideal senior strategic leader—a person possessing a harmonious blend of intellect and temperament—has not changed since Clausewitz's day. Likewise, the ideal developmental model has not changed. The ideal senior strategic leader is developed through infinite experience and the broadest and deepest possible multicultural education, all first hand during early adulthood, with time for critical analysis to arrive at lessons learned. However, time and space limit development to something less than the ideal, and require prioritization of education and experience within the political, technological, and social context of the times.

In ideal world, a leader learns everything, regardless of the temporal context. Napoleon would have benefitted from knowing every language and the history of each territory he invaded. However, to marshal resources effectively for strategic aims, it was more important for him to understand logistics, organizations, and the mathematical principles of artillery warfare. In the postmodern context, a flag officer definitely benefits from knowing the principles of maneuver warfare, but it is also important—considering the humanitarian application of armed forces—to understand languages and cultures. To elucidate the important social, political, and technological features of today, this discussion now turns to a discussion of the postmodern theoretical construct.

[58] Jervis, *Perception and Misperception in International Politics*, 235

Chapter 2

Limitations: The Postmodern Context

Some meaningful, even momentous, and not illusionary change is occurring within armed forces in Western societies.

-- Charles C. Moskos

What is Postmodern Theory?

The term "postmodern" was first applied to an architectural style in the 1960s, and permeated literary criticism in the 1970s by claiming that all writings, historical events, and other "texts" are indeterminate and subject to endless construal. In the postmodern view nothing has any meaning—or even exists—except as interpreted by particular people within a particular context. For example, a book has no meaning or significance until it undergoes interaction with a reader. The individual interpreting the text—instead of the words or events themselves—determines its meaning. As such, postmodernism in literary criticism diverged from modernism in that interaction with the observer became *the* crucial component in determining meaning. Each reader—whose orientation to a text is determined by a genetic background and a unique set of experiences—created meaning out of information. In effect, this concept introduced a profound relativism into popular culture, as it renders moot the possibility of independent truth.

Following the trend in literary criticism, Postmodernism as a social theory gained footing in the early 1980s, calling absolute values into question through the introduction of an absolute relativism.[1] Postmodern social theory is a multifaceted explanation for a broad array of contemporary societal attributes. It encapsulates various terms such as "the information age," "the age of transparency," "the third wave of politics," "the end of history," and "the post-military society". The term captures the idea that society is changing from the old industrial state to something different.

[1] Charles Moskos, *The Postmodern Military* (Oxford: Oxford University Press, 2000), 4.

A diverse assortment of social commentators have presented their versions of postmodern theory. Charles Moskos highlights the relative weakening of the nation-state coupled with the growth of global social organizations.[2] Marshall McLuhan notes the importance of the shift from print to electronic media and equates it with the societal change wrought through the ascendancy of the phonetic alphabet in ancient Greece.[3] Alvin Toffler underlines the transfer from production-based to information-based economies,[4] and Robert Reich adds the concomitant change in dominant occupation from producers to symbolic analysts.[5]

An important social and political change ascribed to postmodernism is the ascendancy of moral relativism and the associated decline in the palatability of idealist intervention based on moral superiority. For example, the concepts of "manifest destiny" and "white man's burden" fell out of favor in the 19th century among Western nations. The duty of the United States to spread democracy throughout the world—as advocated by Presidents Wilson, Reagan, and George W. Bush—remains only as a modern residue in the postmodern context. Author Mike Moore argues that such sentiments—the duty to govern those who are unfit to govern themselves—have died in postmodern times.[6]

The temporal boundaries of the postmodern era, like those of any major sociological period, remain ill-defined. Moskos distinguishes between the modern, late modern, and postmodern eras. In his view, the modern era dates from the Treaty of Westphalia to the end of World War II. The hallmarks of the modern era are the rise of the nation-state and the *levée en masse* of the French Revolution. The late modern period spanned the Cold War. The postmodern era began to take shape some time before the end of the Cold War.

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[2] Moskos, *Postmodern Military*, 4.
[3] Marshall McLuhan, *Understanding Media: The Extensions of Man, Critical Edition*, ed. W. Terrence Gordon (Corte Madera, CA: Ginkgo Press, 2003), 118.
[4] Alvin Toffler, *The Third Wave* (New York: Bantam, 1984), 100.
[5] Robert B. Reich, *The Work of Nations* (New York: Alfred A. Knopf, 1991), 225.
[6] Mike Moore, *Twilight War: The Folly of U.S. Space Dominance* (Washington, D.C.: The Independent Institute, 2008), 243.

Today's armed forces acknowledge the postmodern social, political, and technological context through the recognition of a "new global strategic environment" or the simple enumeration of trends in warfare. For example, the Center for a New American Security notes in *Keeping the Edge: Revitalizing America's Officer Corps*,

> There is an emerging consensus within the U.S. foreign and security policy establishment that an array of political, economic, social, demographic, technological, and environmental trends will profoundly change the global strategic environment. These broad global trends, from environmental factors like climate change to demographic factors, like greater urbanization to technological factors like the increased proliferation of advanced weapons, will manifest themselves in the form of new operational challenges and constraints imposed on the employment of American power, particularly military power, abroad.[7]

Furthermore, the report's authors cite four trends in 21st century warfare: the increasing incidence of small "wars among the people"; the increased incidence of humanitarian and peacekeeping missions, widespread access to weapons of mass destruction, and a 24-hour media environment.[8]

The recognition of a changed global security environment implicitly acknowledges postmodernism in the armed forces but demands a deeper look into the military organization designed to meet such new security threats.

What is the Postmodern Military?

The postmodern military is a theoretical construct that describes changes in military organization with respect to large-scale social changes in the broader societal base.[9] No consensus exists as to whether the broader societal base more significantly shapes military organizations or vice-versa, but historians and sociologists generally agree that society and war are inextricably linked.[10] Moskos' postulated postmodern military is a theoretical future ideal-type developmental construct, *i.e.*, a "postmodern

[7] John A.Nagl and Brian M. Burton, eds. *Keeping the Edge: Revitalizing America's Officer Corps* (Washinton, DC: Center for a New American Security, 2010), 12.
[8] Nagl and Burton, *Keeping the Edge*, 13.
[9] Moskos, *Postmodern Military*, 14.
[10] Samuel P. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge, Mass: Belknap Press, 1957).

military" does not exist but is postulated to exist at some hypothetical future point if current trends continue.[11]

Moskos portrays the postmodern military in terms of five organizational characteristics related to postmodernism in general. First, the postmodern military increasingly blends civilian and military spheres. Second, it diminishes differences based on branch of service, rank, and combat versus support roles. Third, it changes its primary use from fighting wars to performing missions other than major combat operations. Fourth, it is used more often than before in internationally authorized or legitimized missions. The fifth and final change is the multinationalization of armed forces, such as the Eurocorps and the multinational divisions within some North Atlantic Treaty Organization (NATO) countries.[12] A further example of this trend is the International Security Assistance Force (ISAF) in Afghanistan.

To analyze changes in today's military organizations, Moskos also specifies 11 dimensions along which change is expected to occur and characterizes those changes with respect to three eras: modern, or pre-Cold War; late modern, during the Cold War; and postmodern, after the Cold War. These dimensions can be grouped into three main subsets: *military fundamentals, public-military interaction,* and *military demographics*.

First, *military fundamentals* include the perceived threat, major mission definition, and the structure of the force built to counter the threat and perform the mission. The perception of threats shape relations between armed forces and society, and the anticipated threat has changed over time.[13] For example, the perceived threat during the modern era was enemy invasion of a nation or its allies. During the late-modern era the primary perceived threat changed to nuclear war. The perceived threat in the postmodern era includes ethnic violence and terrorism.[14]

Linked closely to the perceived threat is the major mission definition. The United States has variably defined the major mission for its military over the years. From about 1900 to the end of World War II, the mission was primarily homeland defense. Beginning with the Cold War, the U.S. military began to orient toward the major mission

[11] Moskos, *Postmodern Military,* 14.
[12] Moskos, *Postmodern Military,* 2.
[13] Moskos, *Postmodern Military,* 16.
[14] Moskos, *Postmodern Military,* 15.

of supporting alliances such as the North Atlantic Treaty Organization. Following the collapse of the Soviet Union, a growing proportion of United States military expenditures—in time and money—has shifted to peacekeeping and humanitarian missions. Evidence for the ascendancy of this new major mission includes the introduction in the 1990s of new terms in the Pentagon lexicon, such as military operations other than war (MOOTW), sustainment and stability operations, and low intensity conflict.[15]

Perceived threat and major mission definition stem from a pervasive aspect of the postmodern context: globalization. The term "globalization" describes the increasingly interconnected worldwide trade and communication patterns. According to David Killcullen, increased globalization means that war has changed fundamentally. Globalization results in a type of warfare that gives birth to a new lexicon—such as that described above—and shifts away from force-on-force combat operations of the modern and late-modern era.[16] Richard Shultz describes the trend toward operations other than major combat as a trend toward fourth-generation warfare, characterized by a lack of major combat operations.[17]

Along with the perceived threat and major mission definition, the force structure of the United States military has changed along with the modern, late-modern, and postmodern eras. The modern force was a mass conscripted army like that of World War II, whereas the late modern and postmodern force has shifted to a volunteer professional force with the end of the draft in 1973.[18] Furthermore, the role of the reserves has changed significantly from the late-modern period to the postmodern era. Specifically, within the Air Force reserve units and personnel have become much more integrated with the regular Air Force.[19]

Second, the postmodern context has modified *public interaction with the military*. Specifically, the public attitude towards the military has changed, relations between the

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[15] Moskos, *Postmodern Military,* 17.
[16] David Killcullen, *The Accidental Guerrilla: Fighting Small Wars in the Midst of a Big One* (New York: Oxford University Press, 2009), 292.
[17] Richard H. Shultz, Douglas Farah and Itamara V. Lochard, *Armed Groups: A Tier-One Security Priority*. (Occasional Paper 57, Institute for National Security Studies, September 2004), 37.
[18] Moskos, *Postmodern Military,* 18.
[19] Moskos, *Postmodern Military,* 19.

media and the military are different, and civilian involvement in the military has increased.

The public attitude toward the military has changed over time. During World War II, the public attitude towards the military was supportive. The attitude changed during the late modern era, to be described as ambivalent, at best. For example, the popular media often depicted military personnel as buffoonish characters, and support for servicemen and women during the Vietnam War was often dismal.[20] Finally, the public attitude can be characterized as indifferent in the postmodern era, particularly during peacekeeping and humanitarian operations such as Operation Restore Hope in Somalia in 1992-3, or Operation Support Hope in Rwanda, Zaire, and Uganda in 1994. The end of the military draft made service less tangible for the general populace.[21] Even today, when the United States is engaged in two concurrent wars in Iraq and Afghanistan, the public attitude toward the military is generally indifferent—voices offer to "support" the troops but at the same time call for an end to the ongoing conflicts.

Relations between the military and the media describe another dimension along which the armed forces of the United States have changed appreciably. Through World War II, the media were essentially incorporated into the armed forces. They were subject to censorship, had formal status in the military, and were issued military uniforms.[22] In the late-modern period, the media incorporation model gave way to media manipulation in which the defense establishment controlled the media through the use of press pools that restricted journalist's access to military personnel.[23] The postmodern period exhibits an evolution in military-media relations that Moskos describes as courtship, in which the armed services court media coverage, as evidenced by embedded journalism established in 2003.

Another facet of change concerns the involvement of civilian employees in military affairs. Civilians form only a minor part of the defense establishment in modern systems, but become increasingly important in late-modern and postmodern militaries. For example, U.S. warships today require civilian technicians to maintain their weapons

[20] Moskos, *Postmodern Military*, 20.
[21] Moskos, *Postmodern Military*, 20.
[22] Moskos, *Postmodern Military*, 20.
[23] Moskos, *Postmodern Military*, 21.

systems. In another example of the increasingly important role civilians play in the military, more than 10,000 emergency essential civilians served the U.S. military in Saudi Arabia in Operation Desert Storm. Strikingly, contractors make up 53% of the Department of Defense workforce in Iraq and Afghanistan.[24]

The third group of changes contains alterations to *military demographics*. Military demographics have changed in numerous ways including a modification to the type of dominant military professional, the proportion and role of women, the percentage and role of spouses, the incidence of conscientious objection, and the acceptance of homosexuality in the military.

A different type of military professional has dominated the force in each of the three eras described above. The dominant military professional has evolved from combat leader to technician-manager,[25] to arrive at today's dominant military professional: the soldier-statesman or soldier-scholar. The postmodern period has ushered the rise of more scholarly military elites, such as General Wesley Clark, whose diplomatic skill and scholarly demeanor were lauded as positive attributes in his selection as supreme commander of NATO.[26] A list of further examples of the men—for males have dominated the military profession to date—who epitomize the dominant professional in each era includes General Eisenhower in the modern era, General Westmoreland in the late-modern era, and Generals Powell and Petreaus in the postmodern era.

The role of women in the military changes as forces shift from a modern to a postmodern military structure. Specifically, women were largely excluded from military service in the mass army of the modern era. Those women who did serve were relegated to a separate corps, such as the Women's Army Corps (WAC), the Women Accepted for Volunteer Emergency Service (WAVES), and the Womens Air Service Pilots (WASPS). The late-modern period brought a shift toward integration, as women were formally integrated into support roles in the 1970s, and admitted to military service academies in 1976, though they were still largely excluded from combat or high risk service.[27] The

[24] Moshe Schwartz, *Department of Defense Contractors in Iraq and Afghanistan: Background and Analysi* (Washington, DC: Congressional Research Service, 2009).
[25] Morris Janowitz, *The Professional Soldier: A Social and Political Portrait* (Glencoe, Ill.: Free Press, 1960).
[26] Moskos, *Postmodern Military*, 19.
[27] Moskos, *Postmodern Military*, 22.

postmodern period has ushered women into combat roles including—as of February 23rd, 2010—the lifting of the ban on female service aboard submarines.[28]

The proportion of married service members and the role of military spouses has changed. For example, fewer than one in ten draftees were married men in the 1950s, but the advent of the all volunteer force reversed the draft pattern such that military personnel are more likely to be married than their civilian counterparts.[29] Likewise, the role of the military spouse has evolved over time. In the modern military, the military wife was expected to take part in numerous social functions and "volunteer" activities. The late-modern period brought a trend of reluctance to participate in these activities, and the postmodern era—in which a large proportion of military spouses are employed outside of the home—furthers this trend.[30]

The incidence of allowable conscientious objection has increased, and the reasons for objection have become more secularized in the move toward postmodernism. For instance, the military of the modern era often allowed conscientious objection from members of established pacifist churches such as Mennonites, Quakers, and Seventh Day Adventists. If such objectors were not allowed to avoid service altogether, they were often given the option of serving in a non combat military role or serving time in prison. The late-modern era excused conscientious objectors from a broader religious base including Roman Catholics and mainline Protestants. In the postmodern period, religion is no longer the defining characteristic of conscientious objection, as some individuals object to military service on secular humanitarian motives. Interestingly, even military members of the all-volunteer force claim conscientious objector status when faced with deployment to a combat operation such as Operation Desert Storm, Iraqi Freedom, or Enduring Freedom.[31]

Another military demographic change involves homosexuals in the armed forces. The modern military organization strictly enforced the prohibition against homosexuality, incarcerating offenders during wartime and discharging them dishonorably during

[28] Phil Stewart and Susan Cornwell, *Pentagon OKs Lifting Ban on Women in Submarines*. Washington: Reuters, 23 February 2010.
[29] Moskos, *Postmodern Military*, 23.
[30] Moskos, *Postmodern Military*, 23.
[31] Moskos, *Postmodern Military*, 25.

peacetime.[32] The severity of the punishment diminished in the late-modern period, often resulting in medical discharges for homosexual service men and women. The postmodern era highlights the trend toward greater acceptance of homosexuality in the military. Specifically, the "don't ask, don't tell" policy established in 1994 forbade the establishment from inquiring into a member's sexual orientation. More recently, on 2 March 2010 Defense Secretary Robert Gates circulated a memorandum to military leaders calling for the implementation of a repeal of the "don't ask, don't tell" policy to make way for a new policy that bars discrimination against service members based on sexual orientation. This shift towards greater acceptance of homosexuals in the military parallels the trend of acceptance among the broader society as a whole. Specifically, prior to 1974, the American Psychiatric Association considered homosexuality a pathology but revised its definition to remove homosexuality as a disease in the seventh printing of the Diagnostic and Statistical Manual of Mental Disorders, version II.[33]

Clearly, the postmodern military construct enables an evaluation of trends in armed force organization. The next section evaluates recent organizational changes in the United States military against the postmodern theoretical construct.

The United States Movement Toward a Postmodern Military

Even without reference to postmodern theory, any observer can discern that some things have changed within the U.S. military in the past 65 years. The Soviet threat has subsided, and the mission focus of the United States military has changed from major combat operations to nation-building, peacekeeping, and humanitarian support. For example, the United States created a new maritime strategy in 2007—the first new maritime strategy in more than 20 years—which states "preventing wars is as important as winning wars." The novel focus of the strategy includes enhancing the ability to "positively influence events and ease the impact of [natural] disasters."[34]

To buttress the assertion that the primary use of the military is shifting from major combat, Moskos lists 54 actions of western armed forces from the end of the Gulf War to the middle of 1999, of which 31 involve some form of humanitarian aid such as

[32] Moskos, *Postmodern Military*, 24.
[33] R. Bayer, *Homosexuality and American psychiatry: The politics of diagnosis, 2nd Ed.* (Princeton, NJ: Princeton University Press, 1987).
[34] U.S. Navy, *A Cooperative Strategy for 21st Century Seapower*. October 17, 2007.

evacuation, hurricane relief, famine relief, and rescue.[35] Of the remaining 23, only seven approach the characterization of major combat operations; those are listed as air strikes or bombing. The 16 other operations comprise surveillance, monitoring, or observation missions. Even in times of actual warfare, such as the two wars the United States has waged concurrently over the past eight years, major combat operations comprised only 2 percent of the 100-month total involvement. The remaining 98 months of action can be characterized as counterinsurgency, nation building, security operations, and peacekeeping. These observations highlight an altered use of the armed forces.

The changes in media relations with the military draw attention to another major organizational shift toward a postmodern military: the blending of military and civilian spheres. For example, the decision to embed journalists in combat units in the 2003 invasion of Iraq blended the civilian sphere of the traditional press with the military sphere. As was the case for British embedded journalists in the Falklands War in 1982, the journalists became dependent on the military for food, shelter, and security. This dependency created a sense of identification between journalists and soldiers that, some analysts argue, skewed the tone of reporting to a more favorable one.[36]

More recently, soldiers themselves have become journalists of sorts, posting web logs of their combat activity to social networking sites such as Facebook and Twitter. For example, reservist Jean Paul Borda created a web site called milblogging.com that indexes more than 2,400 military-related blogs.[37] In one contentious example of soldier journalism, Lieutenant Matt Gallagher's popular war blog *Kaboom* was taken offline in 2008 after he satirized a commanding officer's attempts to pressure him into taking an unwanted promotion.[38] Clearly, the rise of electronic media and the Internet has blended the military sphere with the traditionally civilian.

The newest geographic combatant command, AFRICOM, provides a second example of the increased blending between military and civilian spheres. Structurally, the Unified Combatant Command created in 2007 differs from other combatant

[35] Moskos, *Postmodern Military*, 282.
[36] Michael Pfau, et al., "Embedding Journalists in Military Combat Units: Impact on Newspaper Story Frames and Tone." *Journalism & Mass Communication Quarterly* Vol. 81, No. 1, Spring 2004, 74-88.
[37] Dao, James, "Leashing the Blogs of War." http://atwar.blogs.nytimes.com/2009/09/08/leashing-the-blogs-of-war/
[38] Dao, James, "Leashing the Blogs of War."

commands in that it employs a civilian Deputy Commander for Civil-Military Activities, currently Ambassador J. Anthony Holmes. Furthermore, the command explicitly acknowledges its blended character in public pronouncements and publications. For example—in a section subtitled *A Different Kind of Command*—its public website notes "AFRICOM reflects a much more integrated staff structure, one that includes significant management and staff representation by the Department of State, U.S. Agency for International Development (USAID), and other U.S. government agencies involved in Africa."[39]

The United States military's adaptations to information technology stand as a third example of the increased blending between military and civilian spheres, and also as an example of the diminished distinction between combatants and non-combatants. Specifically, the creation of a sub-unified cyber command, USCYBERCOM, brings to light several issues that blur the line between traditional military and civilian activities. Susan Brenner points out that the increase in national security threats through cyberspace—cyberthreats—contribute to an erosion of the distinction between combatants and non-combatants.[40] For example, she notes the traditional distinction between threats of war and criminal threats is based on territoriality—the law classifies threats from outside of territorial political boundaries as potential threats of war and threats within a territorial political boundary as criminal threats. In the United States, the Posse Comitatus Act of 1878 separates military activities from law enforcement activities, thus preventing armed forces personnel from responding to criminal threats. However, cyberthreats present a unique problem in that their origin is not readily apparent. Therefore, a determination of the nature of the threat—war or crime—and the appropriate responding party—armed forces personnel or civilian law enforcement—is obfuscated. The state must respond to some cyberthreats quickly, and the organization that responds to the threat will not necessarily know whether it is acting as a combatant or non-combatant law enforcement agent. Thus, the line differentiating combatants from non-combatants blurs in the postmodern context of the information age.

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[39] United States Africa Command. http://www.africom.mil/holmes.asp

[40] Susan W. Brenner, *Cyberthreats: The Emerging Fault Lines of the Nation State* (Oxford: Oxford University Press, 2009), 197.

The North Atlantic Treaty Organization (NATO) also embodies many aspects of the shift toward a postmodern military. First, the organizational structure clearly blends military and civilian spheres. Second, NATO's blend of traditional spheres necessarily extends the scope of military activities beyond the realm of combat strategy into grand-strategy. Third, NATO's combat action against the Former Republic of Yugoslavia highlights the increasing importance of extra-national legitimization of the use of force for humanitarian purposes, a shift in the major military mission definition away from national defense.

First, structurally, NATO is comprised of civilian and military components that interact to reach decisions and take action. The civilian portion includes a permanent representative to the North Atlantic Council, the principal political decision-making body in NATO. A Military Committee of senior officers provides military advice to the civilian bodies within NATO. Additionally, NATO includes standing joint force commands and multiple Combined Joint Task Forces.

Second, the structure within NATO blends the civilian and military spheres of policy. For example, during the first week of Operation Allied Force—the NATO offensive against Bosnia in 1999—military leaders were tasked to "demonstrate resolve" without any associated political strategy or specific objectives. General Rupert Smith, Deputy Supreme Allied Commander in Europe during the operation, summed up the nature of the contemporary military-political blend by stating, "it is unreasonable for the military to ask for precise political strategies and end states from politicians."[41] Essentially, Smith acknowledged the increased blending between traditional military and civilian spheres wrought by postmodernism. The shift can leave grand-strategy in the hands of the military.

Smith's observations regarding the relationship between the professional military and civilian policy makers contrast with Huntington's objective civilian control theory of civil-military relations. Objective control explains that an autonomous realm of military action—an operational level of war completely disjoined from the strategic level of

[41] Dag Henrikson, *NATO's Gamble*: *Combining Diplomacy and Airpower in the Kosovo Crisis 1998-1999* (Annapolis: Naval Institute Press, 2007) 198.

policy—strengthens civilian objective control over the military.[42] That is, professional soldiers should be handed clear political objectives and allowed to conduct military operations free of civilian influence. On the contrary, war and politics are inextricably linked; policy necessarily treads on the conduct of war and vice versa. Elliot Cohen corroborates Smith's observations, noting that Huntington's theory rarely holds in time of war. The postmodern political context highlights the nature of this increasingly pertinent blend between the military and civilian spheres.

Third, Operation Allied Force also provides an example of the international legitimization of armed force to solve humanitarian problems rather than protect against invasion. The operation was a NATO response to violence by the Federal Republic of Yugoslavia (FRY) against ethnic Albanians in Kosovo. The operation sought full compliance with United Nations Security Council Resolution 1199, including a verifiable cessation of FRY military action in Kosovo.[43,44] This single operation underscores two shifts toward a postmodern military: international legitimization of the use of force, and the major mission definition to end a humanitarian crisis.

Conclusion

The postmodern context stems from political, social, and technological changes such as globalization and revolutionary communication technologies such as the Internet. Military organizations shape—and are shaped by—the context of the times in which they exist. An analysis of the United States military reveals a shift in organization, measurable along multiple dimensions.

Moskos posits a shift towards a postmodern United States military. He cites five major organizational changes, measured along 11 dimensions, in which trends can be identified and appraised. Specific examples provide evidence for this shift. First, the increased use of the military for operations other than major combat highlights movement from the primary use of the military for homeland defense to peacekeeping, nation building, and humanitarian operations. Additional examples—changed media relations,

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[42] Huntington, *Soldier and the State*, viii.
[43] United Nations Security Council Resolution 1199, which passed in September 1998, sought to avert an impending humanitarian catastrophe by demanding an end to hostile actions by the Federal Republic of Yugoslavia and Kosovo Albanians.
[44] Henrikson, *NATO's Gamble*, 130.

an increasingly blended civil-military organizational structure, and the blurred combatant/non-combatant distinction—point to the shift toward a Postmodern military's more intertwined civil and military spheres.

The postmodern military serves as an ideal-type future developmental construct with which to evaluate and anticipate organizational trends. By placing observed structural and cultural changes within the framework of the postmodern military model, policymakers can anticipate future trends. An analysis of changes within the United States military today suggests a movement toward the postmodern military construct; this movement demands policymakers develop future senior officers who have the ability to lead such an organization.

The next chapter synthesizes the hypothetical development of the ideal senior strategic leader—presented in Chapter 1—within the context of the Postmodern military developmental construct presented in Chapter 2.

Chapter 3

Developing Senior Strategic Leaders for the Postmodern Military

> *If we expect to develop and sustain a military that operates at a higher level of strategic and operational understanding, then the time has come to address the recruiting, education, training, and promotion systems so that they are consistent with the intellectual requirements for the future joint force.*
>
> *-- Joint Forces Command, The Joint Operating Environment*

How does the postmodern context tie into the theoretical ideal?

The ideal senior strategic leader does not exist, nor does the ideal developmental model; reality limits their attainment. Furthermore, the postmodern military does not yet exist. It is an ideal future-type construct with which to identify and evaluate organizational changes within a broader framework. However, *modifications to the current force development model must approach the ideal with respect to relevant political, social, and technological changes*. The move toward a postmodern military construct demands the assignment of *increasing* priority to developmental methods attuned to its contextual factors. For instance, the future leader must have a blend of intellect and temperament better harmonized to solve *humanitarian* strategic problems within an increasingly *civilian-penetrable* military sphere.

The nature and nurture of senior leadership determines the capability to solve strategic problems. Regarding the nature of senior strategic leaders, the nation must increase the quantity and quality of the pool, must attract and retain the most capable leaders, and must select the right individuals for further development. To nurture potential strategic leaders, the nation must take steps to ameliorate cognitive deficiencies and improve problem solving capability with respect to the Postmodern military context.

The Nature of the Senior Strategic Leader for the Postmodern Military

Three considerations merit discussion regarding the nature of future senior strategic leadership in the Postmodern context. First, the United States must increase the quantity and quality of potential leaders. Second, the nation must attract potential leaders

into military service. Third, the armed forces must select the right people for further military leadership development during their service career.

Increase the quantity and quality of the leadership pool

Clausewitz postulated 180 years ago that the incidence of military genius increases in quality with higher general intellectual development in a given society, and increases in quantity the smaller the range of a nation's activities.[1] To increase the quantity and quality of the leadership pool for the postmodern military requires an analysis of each of these factors.

In the postmodern context, a nation's range of activities increases from territorial defense to include humanitarian assistance, peacekeeping, and nation-building; this increase accompanies a decrease in the quantity of potential military geniuses. The United States military, protector of America's interests around the globe, necessarily performs a much wider variety of roles than simply guarding its borders.

Interestingly, Kenneth Waltz's 30 year-old realist theory provides a useful theoretical framework for understanding the United States' range of activities in the age of globalization. According to Waltz, the anarchic international political structure—in which states act out of self-interest—leads states to behave in ways that tend to create balances of power.[2] States use means available to seek their own preservation, and those means fall into one of two categories: internal or external efforts. Internal efforts include moves to increase economic capability or military strength, for example.[3] External efforts, on the other hand, involve enlarging alliances or shrinking opposing alliances.[4] As rising powers like China increase partnership with states in Africa, the United States must endeavor to increase its partnership activity too, both to increase potential economic activity and to minimize the growth of opposing partnerships. America's increasing involvement in the world seeks to nurture partnership capacity—to create efficacy for the exploitation of future capabilities.

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[1] Clausewitz, *On War*, 100.
[2] Kenneth N. Waltz, *Theory of International Politics* (Boston, MA: McGraw Hill, 1979), 118.
[3] Waltz, *Theory of International Politics*, 118.
[4] Waltz, *Theory of International Politics*, 118.

Another useful capability is prestige, which Hans Morgenthau defines as a reputation for power that enables the achievement of political goals.[5] One possible explanation for recent foreign policy endeavors that have tended toward intervention is that retrenchment decreases prestige in the information age. For example, inaction amidst the Rwandan genocide in 1994 decreased America's standing as the world leader. As word quickly spread of the atrocities being committed by Hutus against Tutsis, the United States' position crystallized—in the view of the international community—as a decision not to act. Of late, instead of retreating the U.S. has embarked on a panoply of foreign involvement including humanitarian relief efforts following an earthquake in Haiti, not to mention pre-emptive warfare in the form of an invasion and occupation of Iraq. As noted in Chapter 2, this increased range of activities is one hallmark of the postmodern military, which performs a wider variety of functions today than the modern military did in the past. Therefore, an effort to increase the number of highly capable senior strategic leaders—those approaching the military genius ideal—must focus on the general society and on attracting highly capable strategic leaders from the general population into military service.

To increase the quality of strategic leadership the nation must endeavor to improve the general educational development of the population. Such a proposition is no small challenge. For instance, a report by Mission: Readiness—a nonprofit, bipartisan national security organization led by more than 60 retired generals—notes that 75 percent of Americans between the ages of 17 and 24 are unable to join the military because of insufficient education, obesity, or criminal records.[6] In effect, the education system in the United States is becoming a national security problem. For if the educational development of the population falls, so too does the incidence of ready and able future leadership.

The United States Department of education highlights a number of statistics that point to the failure of public schools to educate the general population adequately. For example, in 2002 only 32% of fourth-graders could read skillfully at grade-level despite

[5] Michael Sheehan, *The Internatinoal Politics of Space* (London: Routledge, 2007), 20.
[6] Henry Shelton, et al. *Ready, Willing, and Unable to Serve* (Harrisburg, PA: Mission: Readiness, 2009), 3.

historic increases in federal spending on education over 40 years.[7] The No Child Left Behind (NCLB) Act of 2001 was conceived to improve the public education system through the enforcement of minimum standards. However, nearly 10 years after its enactment, the law's effectiveness remains unclear—various statistics can be used to support countervailing claims that the act has improved or damaged education in America.[8] Furthermore, the Organisation for Economic Cooperation and Development's (OECD) Program for International Student Assessment (PISA) 2006 report *Science Competencies for Tomorrow's World* ranked the United States 35th out of 57 countries on their science scale.[9]

The United States has already set in motion at least one mechanism to ameliorate this condition and increase the long-term intellectual development of the population. Specifically, Congress enacted the Post-9/11 GI bill, a stroke of strategic brilliance that rewards service personnel with educational opportunities that they can extend directly to their children. By early June, 2009, more than 51,000 veterans had already applied for the Post-9/11 GI bill benefits.[10] By 15April 2010, the Department of Veterans affairs had paid more than $2.75 billion to cover education expenses for more than 248,000 unique students.[11] Additionally, the NCLB and the "Race to the Top" initiative point to the attention that the United States leadership directs toward improving public education. The "Race to the Top" initiative complements the NCLB Act by providing grants to States that create the conditions to advance educational innovation and reform.[12] All efforts to bolster the general intellectual development of the American populous—including these simple, evolutionary programs—deserve praise.

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[7] U.S. Department of Education, "Why No Child Left Behind is Important to America," http://www2.ed.gov/nclb/overview/importance/edlite-index.html (accessed 5 May 2010).
[8] Linda Perlstein, *Tested: One American School Struggles to Make the Grade* (New York: Henry Holt and Company LLC, 2007), 217.
[9] Organisation for Economic Cooperation and Development, *PISA 2006 Science Competencies for Tomorrow's World, Vol. 1* (Paris: OECD Publishing, 2007), 58.
[10] Veterans Benefits GI Bill, "The Rapid Changes of the Post 9/11 GI Bill," http://www.veteransbenefitsgibill.com/2009/06/08/the-rapid-changes-of-the-post-911-gi-bill/ (accessed 26 March 2010).
[11] United States Department of Veterans Affairs, "Spring 2010 GI Bill Benefit Processing," http://www.gibill.va.gov/spring2010.htm (accessed 5 May 2010).
[12] U.S. Department of Education, "Race to the Top Fund," http://www2.ed.gov/programs/racetothetop/index.html (accessed 5 May 2010).

A more radical and revolutionary idea—but at the same time a more simple suggestion—to improve the general intellectual development of the nation at large is to reapportion the federal budget from the Department of Defense to the Department of Education. The fiscal year 2010 federal budget request allotted 18.74 percent of total spending to DoD, compared to only 1.32 percent to the Department of Education.[13] A shift of funds from DoD could even be billed as an *increased* investment in national defense, improving the general educational development of society. Alternatively, the United States government could enact a fund-shifting provision similar to the 2006 National Defense Authorization Act Section 1207 mechanism that allows the Defense Department to direct its appropriated funds to the Department of State. Under this method, DoD could transfer funds directly to innovative programs within the Education Department that enlarged the pool of potential senior strategic leaders. This tool allows professionals who are dedicated to national defense to evaluate and bolster programs that they think contribute to the long-term interests of the state.

Beyond a greater investment to the general intellectual development of Americans, the government must more effectively exploit the technology of the postmodern era. Specifically, instead of decrying the wasted time youth spend playing video games, the military must embrace this propensity and convert it into a useful learning laboratory to educate young Americans intuition for postmodern strategic challenges. The Defense Advanced Research Projects Agency (DARPA), for example, could contract and subsidize a video game developer to create an entertaining game in which individuals have to solve increasingly complex problems that require the almagamation of expertise from diverse interagency assets. Children spend hours on *Grand Theft Auto* that they might otherwise enjoy "directing" a Central Intelligence Agency team to create the conditions that allow members of the US Agency for International Development to rendezvous with key members of a village Jirga, setting the stage to decrease insurgent behavior among the village's younger males. If done well, hundreds of thousands of video gamers will grow up educating their intuition for intercultural, interagency, humanitarian problems without recognizing they have been

[13] Fiscal Year 2010 Budget, "A New Era of Responsibility: Renewing America's Promise," Office of Management and Budget. http://www.gpoaccess.gov/usbudget/fy10/pdf/fy10-newera.pdf (accessed 6 May 2010).

duped into defining a problem space in which they can start to solve postmodern strategic puzzles.

More fancifully, perhaps postmodern technology will enable the engineering of a harmonious blend of intellect and temperament in the form of a genetically modified human being or an artificial intelligence (AI)-driven robot. With the completion of the sequencing of the entire human genome in 2003, genetic engineering technology promises advances in medical care and, theoretically, the ability to "improve" any phenotypic trait—such as memory capacity—through manipulation of the genotype. Furthermore, the field of artificial intelligence progresses rapidly and could lead to the development of a non-human senior strategic leader. Artificial intelligence systems currently outperform human beings in a number of subjects, including games of strategy like chess.[14]

Within the framework of a theoretical construct, Hughes' concept of *technological momentum* may help explain the future path of AI technologies. Technological momentum describes how technologies interact with society to help shape each other; young technologies, such as AI, are more easily explained through social constructivist theories than technological determinist ones. As the technology matures—in the case of Intercontinental Ballistic Missiles (ICBMs) during the Cold War, for instance—the explanatory power of the competing theories is reversed, and the technology plays a larger role in shaping society.[15] Considering the concept of technological momentum, the most profitable time to steer the course of maturing technologies is during their infancy. AI technology is relatively young, and the U.S. government must remain intimately involved in exploring its potential security applications.

The above analysis suggests how to improve the quantity and quality of the leadership pool in society as a whole, but the next section aims to *deepen the bench*, or increase the quantity of the leadership pool in the military itself.

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[14] Jonathan Schaeffer, et al. "Checkers is Solved," *Science* Vol. 317, no. 5844: 1518–1522.
[15] Thomas P. Hughes, "Technological Momentum," in *Does Technology Drive History? The Dilemma of Technological Determinism*, eds Smith and Marx (Cambridge: The MIT Press, 1994).

Attract and Retain Potential Leaders for Military Service

Because the range of activities increases in the postmodern military construct—and thus the quantity of potential military genius in the general population decreases—the military must enlarge the pool of highly capable strategic leaders by drawing them from the general population into military service. This requirement is enduring—armed forces have long explored ways to draw the best and brightest, often by increasing economic incentives. However, two specific aspects of the postmodern social context require a slight modification to the general retention paradigm: the increasing proportion of working spouses and the increasing length of a typical working career.

Moskos decribes the role of military spouses as one dimension along which the military is changing between modern and postmodern models. In the broader society, households increasingly employ the dual-income model—in which both spouses are employed outside the home.[16] U.S. Census data from 2000 show that in more than half of all households both spouses are gainfully employed full-time.[17] However, spouses of military members are less likely than their civilian counterparts to be employed full time, due in part to the frequent moves required of military members.[18] Military members who are considering leaving the service must consider the effects a continued military career will have on their spouse's employment opportunities.

Two modifications to the officer recruitment and retention paradigm promise to attract and keep potential senior strategic leaders amidst this postmodern social milieu: *lateral entry* and *liberal sabbaticals*. Because highly capable leaders—potential senior strategic leaders—often consider their family and spousal employment opportunities when they decide to enter or leave military service, changes to the existing force development model must allow: first, for people to enter military service laterally from other professional fields such as industry; and second, for people to exit service to give their families stability for a number of years and then return to military service at a higher rank than that at which they left the service.

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[16] Patricia V.Roehling and Phyllis Moen, "Dual Earner Couples," *Sloan Work and Family Encyclopedia*. http://www.psych.ku.edu/dennisk/PF642/Dual-Earner%20Couples.htm (accessed 29 March 2010).
[17] J.E. Dilworth, "Predictors of negative spillover from family to work," *Journal of Family Issues*, no. 25: 241.
[18] Margaret C.Harrel, et al. *Working Around the Military: Challenges to Military Spouse Employment and Education* (Santa Monica: RAND, 2004), 30.

The first modification is *lateral entry*. Lateral entry implies the ability for the military to attract top talent from outside of the armed forces for direct entry into senior positions. The military currently allows lateral entry for legal and medical professionals, and must broaden this scope of career fields. For example, Congress should allow the military to hire corporate executives to serve at colonel or general officer rank upon entry into the service. This lateral entry model would enable highly capable leaders to consider military service as a second career without having to enter as a second lieutenant. Although even the salary of a general officer does not often compare favorably with a corporate executive, the attraction of flag rank and the psychological fulfillment of national service could be enough to attract some men and women with an intellect and temperament harmonized to lead a postmodern military.

Numerous potential drawbacks accompany the lateral entry model, however. For example, the lateral entry model could potentially decrease the attractiveness of military service for highly capable young people. If they wanted to perform military service, and saw themselves as future military leaders, they might be more likely to skip the junior grades and work somewhere else as young men and women. As the system currently stands—a closed meritocracy—individuals who aspire to flag rank in the military have to work their way up from the bottom of the officer rank structure. Another potential drawback is lack of leadership credibility upon lateral entry. Junior service members might not view senior leaders as credible military men and women if they have not previously served. However, the military could mitigate this risk by selecting only highly capable, credible leaders for lateral entry—people who would immediately assuage the fears of the people they lead.

The second modification is to allow *liberal sabbaticals* for mid-level officers to exit service and subsequently return with a higher rank than that with which they left. A sabbatical provides a potential senior strategic leader to provide stability for his family while gaining experiences that are relevant to the postmodern strategic context. For instance, a Major with 15 years of experience could take a five-year sabbatical to earn a doctorate in military history or work in another government agency such as USAID. The experiences gained could inform the individual's intuition for postmodern strategic problems. However, middle-level officers who want to exit the military today cannot

return to service with a rank that has progressed as the years have passed. Although their experiences may serve them well as potential senior strategic leaders, the prospect of re-entering military service at the rank of Major dissuades them from service.

Potential drawbacks of the liberal sabbatical concept include the possibility that talented young officers will leave the service with the intent of returning to a leadership role in the future but will not return. If they found leadership success in the business world, they would likely grow accustomed to an executive lifestyle that military pay and benefits cannot support, which would prove to be a strong disincentive to returning to service. Furthermore, similar to a drawback with the lateral entry concept, sabbaticals could decrease the allure of staying in the officer corps as majors and lieutenant colonels. If highly capable junior officers thought they could become senior military leaders without working long, thankless hours as "iron majors," more might choose to get out, and not all of them would return.

An interesting pseudo-precedent for the sabbatical concept in the course of senior leadership development exists. General Kevin Chilton, USAF, currently the Commander of United States Strategic Command (USSTRATCOM), essentially exited military service when he was detailed to the National Aeronautics and Space Administration (NASA) as a young major. Following 12 years of service with NASA, Chilton returned to Air Force service as a wing commander. Over the course of those 12 years, Chilton's rank progressed faster than most other officers in his year group. He reached the rank of colonel a full six years sooner than his primary zone of promotion. Upon his return to duties in the line of the Air Force, Chilton progressed rapidly through the flag ranks, culminating in his confirmation as a four-star general and USSTRATCOM commander. Thus, Chilton's career progression from major to colonel over twelve years in a different federal executive agency serves as precedent for the sabbatical concept.

Another aspect of society that has changed is the increased lifespan and the concomitant increase in length of a typical working career. The average lifespan in the United States has increased from 70 to 78 years since 1960.[19] Accordingly, the "retirement age" has increased as well, though not in a manner so easily measured. For

[19] World Bank, "Life Expectancy at Birth," http://datafinder.worldbank.org/life-expectancy-at-birth/chart (accessed 29 March 2010).

example, the 1967 Age Discrimination in Employment Act—one indicator of the age at which people choose to retire from full-time employment—originally prohibited employers from discriminating against employees based on age, up to age 65. In 1978, the act was modified to provide protection up to age 70. In 1986, the age limit was removed from the act altogether.[20] As members of society choose to spend more years in the workforce, the structure of the military retirement benefit used to encourage senior military leaders to leave the service after 30 years.

Appropriately, Congress has already enacted one simple modification to military pensions to retain highly capable senior leaders in the postmodern context. In 2003 Secretary of Defense Donald Rumsfeld proposed a change that would allow members of the armed forces serving 40 years to earn a full-base-pay pension.[21] Rumsfeld's proposal was enacted into law in the National Defense Authorization Act of 2007, allowing top-tier military professionals to retire with pensions up to their full base pay.

Within the postmodern context of an increase in the retirement age and the incidence of spouses who choose to work full time, the military force development paradigm must allow lateral entry and liberal sabbaticals to attract and retain potential senior strategic leaders. Despite the potential drawbacks, these modifications to the officer personnel system would benefit the nation through a larger pool of highly capable leaders.

Beyond such moderate alterations, policy makers should also consider some radical ideas to attract and retain potential senior strategic leaders for the postmodern military. Two possibilities include national service and earlier leadership selection and development. First, the prospect of national service deserves discussion. The concept of national service is not new. For instance, King Frederick William I's canton system in the 1700s and the Krumper system in the 1800s established near-universal service for Prussia.[22] Importantly, the goal of universal national service is not to strengthen the

[20] William J. Wiatrowski, "Changing Retirement Age: Ups and Downs," *Monthly Labor Review*, April 2001, 9.
[21] Michael Killian, "Rumsfeld Submits Report Calling for Sweeping Changes in Military" *Chicago Tribune*, 15 April 2003.
[22] Everett C. Dolman, *The Warrior State: How Military Organization Structures Politics* (New York: Palgrave MacMillan, 2004), 133.

state's military might, but to strengthen the state *politically*.[23] Indeed, Plato recognized unqualified universal democracy as akin to mob rule.[24] A system in which individuals have to earn the right to democratic participation through national service promises to strengthen the state by elevating the level of political discourse. Furthermore, a national-service system would attract potential leaders from various backgrounds, increasing the size of the pool from which senior strategic leaders could be chosen. The disadvantages of such a radical proposal are obvious. A proposal for mandatory national service in the United States—just like any other significant shift from the status quo—would be met with severe resentment, and could be politically unfeasible.

Second, the military can select and develop future senior strategic leaders at an earlier point in their lives. For example, if the military selected the top 2 percent of graduates from each commissioning source and placed them on a strategic-leadership career track, they could benefit from approximately 12 years of strategic leadership-specific education and experience. For instance, lieutenants and captains could lead interagency task force elements on humanitarian relief efforts or immerse in other departments for a number of years. Instead—in the Air Force, for example—highly capable officers spend the first dozen years of their career getting experience and education in highly specific technological platforms. Any increase in the length of time dedicated to senior strategic leadership development moves toward the ideal developmental model.

This second radical proposal also contains drawbacks. One problem is that the military still requires technical expertise. To drain the weapons schools of the most talented individuals will decrease the nation's tactical prowess. However, to sacrifice a modicum of tactical supremacy to boost strategic skill is more than a fair trade.

In addition to keeping the bench deep with intellectual capability, the nation must also select the right individuals for the nurture of continued leadership development.

[23] Dolman, *Warrior State*, 171.
[24] Dolman, *Warrior State*, 12.

Select the right people for strategic leadership development within the military

How can the military pick the right people to develop? Obviously, the military must pick the most capable potential senior strategic leaders for further development. The difficulty lies in implementing such a simple proposal.

Current leadership promotion models were built for the late-modern military and promote officers who demonstrate operationally focused skills attuned to the Cold War.[25] Today's promotion model is technology-platform biased, particularly in the Air Force and Navy.[26] For example, 12 out of 13 Air Force four-star generals are rated pilots, a drastic overrepresentation of a career-field that employs only about 20 percent of all Air Force officers.[27] Such a model does not necessarily select the right individuals for senior strategic leadership. A promotion system that rewards service in specific technology platforms does not approach the ideal in relation to the current social, political, and technological context. The United States military—indeed the United States government—deserves an update to the personnel system that selects people for development as senior strategic leaders.

To reform this aspect of the personnel system is paramount, for—as retired Major General Robert Scales notes—"PME reform is not a pedagogical problem, it is a personnel problem."[28] Defense Secretary Robert Gates complements Scales' remarks in saying, "In the end, the military capabilities we need cannot be separated from the cultural traits and reward structure of the institutions we have."[29] However, any reform of the way in which the military selects officers for further development will be met with stiff resistance.[30] Nevertheless, this personnel system update would help military senior leadership approach the ideal, as did the watershed leadership development change in the

[25] John A. Nagl and Brian M. Burton, eds., *Keeping the Edge: Revitalizing America's Officer Corps* (Washinton, DC: Center for a New American Security, 2010), 7.
[26] Nagl and Burton, *Keeping the Edge*, 39.
[27] Air Force Personnel Demographics, http://www.afpc.randolph.af.mil/library/airforcepersonnelstatistics.asp , Air Force Personnel Center (accessed 30 March 2010).
[28] Robert H. Scales, "Too Busy to Learn," *Proceedings Magazine*, vol. 136, February 2010.
[29] Nagl and Burton, *Keeping the Edge*, 66.
[30] Nagl and Burton, *Keeping the Edge*, 63.

transition to the modern military: Scharnhorst's military meritocracy that replaced leadership selection based on genealogy.[31]

The potential watershed change in the transition to the postmodern military is to tailor the current system—that promotes active operational and tactical service—with a *blind multivariate interagency meritocracy* that promotes and develops people who possess characteristics of the ideal senior strategic leader—regardless of their current service, career field, or technological platform. Because fitness reports necessarily detail an individual's performance in a particular career field, the blind multivariate interagency meritocracy must be supported by two bureaucratic innovations. First, the U.S. government must institute an interagency personnel system designed to select and promote future senior strategic leaders. Second, each service must critically evaluate officers regarding the attributes necessary for senior strategic leadership, *i.e.*, the characteristics of the ideal senior strategic leader.

First, only an interagency personnel system can truly be career-track blind. This contention is based on the fact that individual service personnel systems revolve around what Samuel Huntington called a *strategic concept*, the fundamental element of a military service and the statement of its basic purpose in implementing national policy.[32] For instance, the fundamental element of the Air Force shortly after World War II was strategic bombing, and bomber pilots were therefore promoted and developed out of proportion to their numbers with respect to the rest of the Air Force. Furthermore, according to Mack Owens, Associate Dean of Academics at the Naval War College, this strategic concept helps define organizational culture. Carl Builder notes that organizational culture creates a service personality that can persist for a very long time.[33]

As long as each individual service selects only members with the right "personality" for the service's organizational culture, potential senior strategic leadership for the United States Government, as a whole, suffers. Indeed, not only do individual services promote people based upon their organizational culture and strategic concept,

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[31] William H. McNeill, *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000* (Chicago: Chicago University Press, 1982), 216.
[32] Mackubin T. Owens, "Civil-Military Relations and the U.S. Strategy Deficit," http://www.fpri.org/enotes/201002.owens.civilmilitaryrelations.html Foreign Policy Research Institute, February 2010.
[33] Owens, "Civil-Military Relations and the U.S. Strategy Deficit."

but they also perform the reciprocal. That is, the services shift highly capable people into new technology-based platforms in an effort to steer the organizational culture and strategic concept toward that technology. For example, the Air Force has started to reassign outstanding officers—those promoted early to the rank of lieutenant colonel or colonel—from the fighter-pilot track into the unmanned aerial vehicle track in order to shift the organizational culture toward new technologies.

To fix this problem, a new interagency personnel system need not take over the entire U.S. military promotion and force development system. Instead, it should be authorized to select up to five percent of the individuals from each executive department in the federal government for strategic leadership development. Beginning at the mid-career stage, this new interagency system would be able to assign officers, diplomats, economists, and other federal executive agents across various disciplines and departments in order to assess and develop a harmonious intellect and temperament for postmodern strategic problems. The strategic concept of this new interagency corps of government professionals would be, above all else, *strategic thinking*.

The interagency corps idea comes with numerous drawbacks. First, it contains hints of the German General Staff model. Although the German General Staff was, in many ways, an effective military tool, it manifested several weaknesses. For example, the General Staff was sufficiently powerful to influence the German legislature and wrest military authority away from the ministry of war.[34] Such a move in the United States would undermine objective civilian control.[35] Furthermore, Bismarck lamented that the General Staff was bound to foster a desire for preventive war.[36] Similarly, an interagency strategic corps in America might seek to shape future conditions through preemptive war. Finally, even a group of highly intelligent people is prone to "groupthink." On the German General Staff before World War I, for example, it became "axiomatic" that Germany would have to fight a two-front war in the near future.[37] Nobody bothered to question the central assumptions because they were steeped in them over many years.

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[34] Dolman, *Warrior State*, 143.
[35] Huntington, *Soldier and the State*, viii.
[36] Walter Goerlitz, *History of the German General Staff 1657-1945* (Westport, Connecticut: Greenwood Press, Publishers, 1953), 101.
[37] Goerlitz, *History of the German General Staff*, 130.

Second, each service and executive department must begin evaluating officers for promotion and potential development as senior strategic leaders on the basis of intellect and temperament in addition to evaluating tactical and operational prowess. Such an evaluation of characteristics such as discretionary decision making and intellectual capability will help the new interagency personnel system select what Robert Komer calls "flexible imaginative conflict managers."[38] This new evaluative focus must be multivariate, based on the traits of the ideal senior strategic leader discussed in chapter 1, such as decision making ability under stress, comfort with cognitive dissonance, and breadth of education.[39]

A shortcoming of this idea is the possibility that each service will be required to send many of its top thinkers away to the new interagency corps. Like the drawbacks of the German General Staff, this potentiality creates the risk that such potential strategic leaders will begin to think the same. Furthermore, it creates the framework for a "brain-drain" away from the services, which might result in a dearth of independent-minded strategic solutions to political problems.

An analysis of the nature of senior strategic leadership for a postmodern military reveals that the United States must increase the quantity and quality of the leadership pool in the population at large, attract and retain highly capable strategic leaders, and select the right individuals for further development towards senior strategic leadership positions. In turn, this further development—the *nurture* of future senior strategic leaders—merits study.

The Nurture of the Senior Strategic Leader for the Postmodern Military

Regarding continued nurture, the nation must make progress in changing the force development model to more closely approximate the ideal model with respect to the postmodern context. Therefore, changes to the force development construct must ameliorate cognitive deficiencies and improve problem solving capability for postmodern strategic puzzles.

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[38] Robert W. Komer, *Bureaucracy Does its Thing: Institutional Constraints on US-GVN Performance in Vietnam* (Santa Monica: RAND, 1972), 155.
[39] Malcolm Gladwell, *Blink* (New York: Little, Brown and Company , 2005), 275.

Ameliorating Cognitive Deficiencies

The ideal strategic leader, postulated in Chapter 1, is immune to cognitive shortcomings; real human beings, however, exhibit cognitive faults to varying degrees. The United States must nurture its future senior strategic leaders to enhance their intellect and mitigate five principal cognitive deficiencies: irrational consistency, assimilation of information to pre-existing beliefs, premature cognitive closure, discomfort with cognitive dissonance, and the need to create a narrative. A proposed interagency personnel system, *lateral-entry* senior leader force development options, and *sabbatical opportunities* promise to nurture senior leaders away from these cognitive shortfalls.

The first two frailties—irrational consistency and assimilation of information to pre-existing beliefs—are closely related and can be ameliorated similarly in the postmodern context. Interestingly, postmodernist relativism itself stands as a potential mitigator of the natural human drive for consistency and the tendency to assimilate information to pre-existing—particularly, traditional religious—beliefs. For example, during the Cold War American leaders exhibited—or, more generously, strategically manipulated—these weaknesses when they deliberately strengthened the contrast between an in-group (the United States) and an out-group (the Soviet Union). By introducing the phrase "under God" into the pledge of allegiance and by replacing the *de facto* national motto "*e pluribus unum*" with a religiously based motto: "In God We Trust," Eisenhower-era legislators helped predispose the American public, and its senior strategic leaders, to consider all things "godless communist" to be bad, and to fail to see, to reject, discredit, or admit puzzlement over any Soviet policies that might be beneficial.[40] In the profound relativism of the postmodern context, such overkill and cognitive-affective balance become less likely.

Although postmodernist relativism mitigates some of the effects of the first two cognitive weaknesses, a systematic nurture can further strengthen a senior strategic leader's mind against them. Specifically, an interagency personnel system that assigns potential senior strategic leaders to positions outside of the Department of Defense more dependably exposes them to pre-existing beliefs different than their own. Likewise, the availability of lateral-entry to senior military leadership positions increases the chances

[40] Senate, *Establishment of National Motto of the United States*, 84th Cong., 2nd sess., 1956, 13917.

that the interchange of ideas among senior military leaders will be between people who do not share the same pre-existing beliefs. For instance, a lateral-entry general who was nurtured in the foreign service corps in the U.S. State Department might be less likely to view some ambiguous Chinese actions—such as a manned space program—as a military threat, and could embrace strategic opportunities for cooperation that his colleagues cannot see. Finally, the opportunity to take a sabbatical and return to military service also increases future senior strategic leaders' exposure to ideas and beliefs different than their own, thus mitigating two cognitive shortcomings.

Contrary to the first two frailties, the third and fourth weaknesses—premature cognitive closure and discomfort with cognitive dissonance—become *more likely* in the postmodern context. Paradoxically, the huge abundance of information today makes the avoidance of premature cognitive closure more difficult. So much data is often available to quickly support multiple conclusions, but this leads to cognitive dissonance, with which people are uncomfortable. Therefore, *they draw their conclusions more quickly in the information age,* and subsequently discard information from sources with whom they disagree. During the process of this source-message interaction, people sacrifice the truth—correct, useful interpretations of ambiguous information—for the sake of self-esteem. Furthermore, in the information age facts can arrive quickly in small batches; such information is easier to discard than that which arrives in large quantities.

The fifth cognitive deficiency, the need to create a narrative, stems from the limitations on the human brain's capability to ascertain, retain, and retrieve information. The postmodern context both mitigates and exacerbates the effects of this mental drawback. Specifically, the invention of the Internet, which allows access to an unprecedented amount of information in an increasingly rapid manner, theoretically extends a leader's ability to retrieve information. However, the expanded access to information paradoxically strengthens the human desire for a simple narrative in which to frame the information. This desire stems from the natural discomfort with cognitive dissonance.

To gird postmodern senior strategic leaders against such cognitive faults, their nurture must habituate comfort with cognitive dissonance and discomfort with small-batched information. First, their education and experience must teach them that a good

decision does not always feel good. Kristin Lord describes this idea by saying what is for sale in the marketplace of ideas is not necessarily truth, but self esteem.[41] As noted in Chapter 1, people make good decisions by reaching compromise judgments on disparate, often conflicting information; they then seek to rationalize their decisions as having been based on overwhelming information by rejecting further conflicting information, particularly if it arrives in small bunches. Second, their nurture must teach senior strategic leaders to be uncomfortable with a decision process that acts quickly based on small sets of information. The leader must default to wait—if it is possible to delay a decision—or to arrange to receive the maximum amount of relevant, conflicting information at one time. Although the conditions of war—which demand quick decisions based on limited information—limit such a decision-making process, the senior strategic leader must try to achieve it. But, the leader must not become indecisive or slow to act—a balance must be struck between the need to make rapid decisions and the need to assimilate more information before deciding.

Again, in the postmodern context, an interagency personnel system, a lateral entry option, and sabbatical opportunities can serve to increase cognitive strength against these two shortcomings. The culture of the United States armed forces predisposes leaders to act quickly and decisively. Exposure to different decision-making methodologies, such as the U.S. Agency for International Development or the State Department—mandated through the proposed interagency personnel system, and also available through a lateral entry model or a sabbatical opportunity—nudges the senior strategic leader toward a decision model that habituates greater comfort with cognitive dissonance and discomfort with small-batch decision-making.

Improving Problem Solving Capability with Respect to the Postmodern Context

To nurture an individual towards ideal senior strategic leadership capability requires improving problem solving ability. Current problem-solving theories involve a problem space, a schemata base, search skills, creativity, imagination, and deductive reasoning. Therefore, changes to the current force development model must improve each of these aspects with respect to the postmodern military context. That context—the

[41] Kristin M. Lord, *The Perils and Promise of Global Transparency: Why the Information Revolution May not Lead to Security, Democracy, or Peace* (Albany: State University of New York, 2006), 120.

increased blend between military and civilian spheres, diminished differences based on branch of service, rank, and combat versus support roles, an altered primary use of the military, increasing international authorization or legitimization of military missions, and multinationalization of armed forces themselves—is the agar on which cognitive schemata must grow.

Three specific steps will catalyze problem solving ability in the postmodern context. First, the nation must expand the human side of the strategic leader's problem space while maintaining the technological side. Second, the government must broaden the interagency and international schemata foundation. Third, the nurture of the senior strategic leader must teach him how to think, rather than what to think.

First, to improve problem solving capability for postmodern strategic problems, the government must make more room on the human side of the military problem space. Mike Hagerott argues that the U.S. Navy officer corps has become unbalanced in favor of technical and specialized knowledge at the expense of more operational, general, and integrative knowledge.[42] His knowledge area quadrant model suggests an overdevelopment of problem solving capability through technological means, and an underdevelopment of the more general, integrative side.[43] Furthermore, Frank Hoffman points out that the future military operating environment—likely urbanized and densely populated—presents difficult physical terrain, but *even more challenging human terrain* for senior strategic leaders to navigate.[44]

To expand the human side of a decisionmaker's problem space requires a broad liberal education, language, and culture training early in the individual's career. Accordingly, Don Snider recommends that the services

> re-establish emphasis on a broad liberal arts education as the pre-commissioning foundation for officer development, regardless of source of commission. In the information age, the role of a baccalaureate education has changed remarkably. In the industrial age such a degree was the requisite preparation for entry into the white collar workforces of government, management, and entrepreneurship. Today, however, given the explosion of knowledge, success in those roles is better facilitated by the individual's first graduate degree. Thus, recognizing that all officers will have graduate degrees, the professions should encourage a

[42] Nagl and Burton, *Keeping the Edge,* 40.
[43] Mark Hagerott, *Developing Leaders in Complex Technical Organizations: An Historically Based Model for Personnel Managers* (Washinton, D.C., Center for a New American Security, 2009).
[44] Nagl and Burton, *Keeping the Edge,* 29.

> broader liberal undergraduate education grounding the future officer in the ideals, institutions, and people he or she will defend.[45]

Similarly, Nagl advocates an increased emphasis on language and culture training throughout an officer's career.[46] One practical step to increase language and culture training is to enlarge the corps of area specialists. These individuals, from various career fields, can be posted to exchange positions and schools in a particular country or region off and on throughout their entire career.

Faced with the limitations of time, increased language and culture training come at the expense of specialized technological training. Clearly, the United States military must maintain the ability to leverage technology to solve strategic puzzles and cannot undermine science and technology training completely. To maximize the benefits of an increased emphasis on social and cultural education while mitigating the adverse affects on technological education, each military service must rebalance its traditional career track structure to become less technology-centric. Hagerott suggests that the Navy, for example, augment the traditional platform-based communities—aviation, surface, and submarine—with knowledge-based communities: technical, general, and international.[47] Such a proposition, if enacted, promises to create an additional sub-culture—like the platform-based communities already are—around which officer's careers can revolve, with which people can identify and start to frame problems and solutions within those novel schemata.

Second, the government must broaden the foundation of interagency and international military schemata. Snider advocates a policy to mandate that officers serve two out of their first 12 years of service outside of the military. He notes "the developmental benefit is obvious: civilian graduate school, foreign immersion, and business experiences are the only opportunity in the overcommitted life of current officers for the essential reflection and contextualization that contributes so richly to a broadly gauged officer capable of sound discretionary judgments."[48] Additionally, Patrick Cronin recommends increasing the number of international fellowships available

[45] Nagl and Burton, *Keeping the Edge,* 24.
[46] Nagl and Burton, *Keeping the Edge,* 7.
[47] Nagl and Burton, *Keeping the Edge,* 45.
[48] Nagl and Burton, *Keeping the Edge,* 24.

for officers to attend foreign educational institutions.[49] At the very least, Cronin advocates allowing military officers and civilians to debate strategic issues together in an environment where the world does not depend on it, so that they can act more effectively when it does.[50]

Third, the nurture of senior strategic leadership must teach how to think, not what to think. In terms of learning theory, this type of instruction falls under Saltz's second type of learning: learning for problem solving, rather than learning for retention.[51] This type of education is best supported by a broad range of activities and experiences.[52] Furthermore, learning for problem-solving takes a great deal of time and reflection. The very act of observing, orienting, theorizing, testing, and reorienting over time produces the relatively permanent change in behavior that is learning. To allow the time to deduce for themselves when to use thought, search, deduction, intuition, creativity most fruitfully, the government must allow potential senior strategic leaders the time to instruct at an institution of higher learning or to pursue advanced degrees. This requirement can be installed as a prerequisite to flag rank for individuals designated for interagency strategic leadership. Whereas the primary promotion system modification of the Goldwater-Nichols Act was to require officers to "check the *joint* tour box" before flag rank, the crucial piece of the next advance would be the necessity to "check the *thinking* tour box."

Of course, not every individual is temperamentally predisposed to learning for problem solving; Clausewitz's apt observation—that the calm, inquiring mind, not the excitable and creative one, is more likely to achieve military genius—still fits today. As a result, it is the duty of today's senior strategic leaders to promote, or recommend for promotion, people who exhibit those characteristics and are dedicated to life-long reflection and learning. The men and women who they groom for future senior strategic leadership in the postmodern context need not necessarily be members of the armed forces, and can come from various government agencies, NGOs, and industry.

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[49] Patrick, M. Cronin, *A Strategic Education: The Means and Ends of the Intellectual Battlespace* (Wahsington, D.C., Center for a New American Security, 2010), 10.
[50] Cronin, *A Strategic Education,* 6.
[51] Eli Saltz, *The Cognitive Bases of Human Learning* (Homewood, IL: The Dorsey Press, 1971), 11.
[52] Nagl and Burton, *Keeping the Edge,* 16.

Finally, this subject requires a refutation of a radical idea to improve problem solving capability for postmodern problems: *complete postmodern buy-in*. Specifically, the idea of complete postmodern buy-in suggests that the United States must embrace the postmodern trend by outsourcing its most talented potential senior leaders to intergovernmental or multinational entities. To implement such a proposal, for example, the United States could pursue an international military personnel system, complete with its own strategic culture and purpose. Such an idea is not in the best interest of the state itself, obviously, as it potentially undermines sovereignty.

More importantly, however, this idea does not protect the interests of the *people* of the United States. Goerlitz draws a distinction between the interests of the state and the people, noting that the military is designed to protect an essential reality, either the state *or* the people. To the Prussian officer corps, the essential reality was the state. Drawing from Hegel's philosophy—which held that the state was God's manifestation of Himself in the world—Clausewitz thought of the state as the great super-individuality to be protected.[53] However, the distinction between the protection of the state and the people is a false dichotomy. The interests of the people are protected by the security of the state. As long as the state primarily provides security for the people, the people's interests depend on the survival of the state. Although postmodern theory projects the end of the nation-state, the United States must not become the *avante-garde* by sacrificing state security in the name of international peace. Therefore, the U.S. must not outsource its most capable individuals to international organizations.

Conclusion: Nature and Nurture of Senior Strategic Leadership

Although the ideal senior strategic leader has not changed over time, the actual leadership development regimen must fit the context of the time. As stated in Chapter 2, the U.S. military experiences over the past 20 years describe a postmodern context full of humanitarian intervention and interagency solutions to political problems. The current trend of the United States military is towards a postmodern developmental construct, which prescribes a force development model harmonized to its contextual factors. The

[53] Goerlitz, *History of the German General Staff*, 62.

development of senior strategic leadership for the postmodern military is a function of both nature and nurture.

The government must ensure that the military has the right raw materials—people with a natural harmony of intellect and temperament in tune with the postmodern context—to mold into senior strategic leaders. This can be accomplished by increasing the quantity and quality of potential leaders, attracting potential leaders into military service, and selecting the right people for further military leadership development during their service career. Once the raw materials are procured, the nation must nurture their talent to ameliorate cognitive shortcomings and improve problem solving capability with respect to the postmodern context.

This chapter suggests many specific proposals to improve the nature and nurture of postmodern military strategic leadership. Many people within and apart from the United States government have proposed similar policies to those presented herein, and the government has already instituted a number of these policies. The concluding chapter summarizes the arguments made in this paper and concentrates the imperatives for change to more profitably develop senior strategic leaders for the postmodern military.

Conclusions

American national security—and consequently the safety and ability to pursue happiness of the people of the United States—depend upon capable senior strategic leadership. Such leadership depends on the nature and nurture of individuals. Any policy discussion regarding force development reform deserves fresh insight and analysis that defines the problem from a different angle than "the way it's always been done." This study has attempted to redefine the problem space surrounding officer professional development by investigating the ideal nature and nurture of senior strategic leadership in a postmodern context.

Clausewitz's concept of military genius serves as a theoretical ideal construct for the nature of strategic leadership: a harmonious blend of intellect and temperament. Furthermore, cognitive science informs the ideal nurture of such leadership: an infinite education and experience that informs intuition and courage. Although the United States military has changed since the end of the Cold War, the ideal leadership development model has not. However, time and space limit the development of leaders to something less than the ideal. Changes to the leadership development model must, therefore, harmonize leadership with respect to the social, political, and technological context of the time.

The postmodern military operates in a "new global strategic environment" in which it acts to shape the international situation by developing partnerships, establishing democracies, and providing humanitarian relief around the world. Some analysts might consider such use of the military to be ill-informed or misguided by idealism. Paradoxically, however, increased humanitarian involvement fits in line with a realist view of international relations. In this postmodern information age, retrenchment invokes disdain and decreases prestige on the international stage. Prestige is a capability that enhances state potential for survival. Therefore, even in a realist sense the ideal form of preemptive war is a humanitarian intervention that eliminates the conditions that lead to war—Sun Tzu's concept of "victory before battle ensues."

To improve the nature and nurture of senior strategic leadership for a postmodern military, the nation must proceed with three principles in mind. First, *an investment in*

education is an investment in national defense. Second, *technology can be exploited to approach the ideal senior strategic leader*. Third, *leadership development is a personnel problem* more than it is a pedagogical problem. On a note of caution, the United States must not become so enamored with postmodernism that is sacrifices state security for international harmony.

First, an effective investment in education enhances national defense. Programs that improve the general intellectual development of society as well as proposals to increase the level of education in the military both enrich U.S. security in the long term. Specific legislation, such as the No Child Left Behind Act and the Race to the Top Initiative always comes replete with "devils in the details," but should be seen as an investment in the long-term safety and happiness of the people. Likewise, military education reforms that trade tactical or technical expertise for broader intellectual development also enhance state security.

Second, technology can increasingly be exploited to boost the nature and nurture of leadership toward the ideal. Whether through the use of video-game technology or more advanced and hypothetical innovations like genetic engineering or artificial intelligence, the U.S. government must continually investigate ways to leverage technology to create senior strategic leaders who are closer to the ideal model. With Hughes' concept of technological momentum in mind, the military must recognize that it can most easily shape nascent technologies. Importantly, strategists must refrain from categorical statements that artificial intelligence will never take over military leadership functions in warfare.[1] Instead, they must seek to shape the technology to enhance senior strategic leadership in the information age and co-opt the technology when possible.

Third, leadership development is a personnel problem more than a pedagogical problem. To improve the nurture of senior strategic leadership, policy makers must focus on the personnel system and service cultures. Proposals such as lateral entry and liberal sabbaticals can be implemented quickly, and radical ideas must be considered at every turn. Of course, the collection of personnel policies within the U.S. government create a system of interrelated elements. Changes to one aspect of the system will have

[1] David J. Lonsdale, *The Nature of War in the Information Age: Clausewitzian Future* (London: Frank Cass, 2004), 119.

consequences on many other components, and should be considered through a systems approach. Personnel policy changes will also likely incur unintended consequences, and the effects of such modifications must be continually monitored by reform advocates.

Advocates of Education Reform for the Postmodern Military

The Honorable Ike Skelton, Robert Scales, Patrick Cronin, Mack Owens, John Nagl, Mark Hagerott, and many others advocate changes to the way the United States military develops its senior strategic leaders. Congressman Skelton, the champion of military education reform, focuses on military education as a whole, and is credited with revitalizing Professional Military Education (PME). Robert Scales and Patrick Cronin advocate a deeper investment in developing strategic thinking in the military, primarily through systematic reform above pedagogical curriculum changes. Likewise, Owens, Nagl, Hagerott, and many others suggest specific ways to improve the capability of the armed forces to operate in a new strategic environment.

Each of these advocates of military education reform recommends changes that harmonize senior strategic leadership development for the postmodern military, whether they acknowledge the influence of postmodernism or not. Furthermore, the United States government has already taken steps to improve leadership development in the postmodern context, but some changes remain to be implemented.

Completed Adjustments

Through the words and actions of reform advocates like those named above, the United States has made great strides in improving the nature and nurture of senior strategic leadership for the postmodern military. Specifically, legislative action such as the passing of the Post-9/11 GI Bill and the removal of the 75 percent cap on military retirement pay have placed the nature and nurture of senior strategic leadership closer to the ideal with respect to the current social, political, and technological context. Furthermore, military force development policy adjustments that increase the availability of strategy, interagency, and exchange education opportunities do the same. Educational initiatives inside and outside of the Department of Defense have contributed to America's long-term security.

The Next Steps

Many steps remain, however, to move the senior strategic leadership development model closer to the theoretical ideal within the postmodern military context. First, the government must produce a strategic education champion in Congress to pick up the work for Congressman Skelton. Although Skelton is still an active, able politician and education advocate, it is never too early to designate the next, or another, supporter in the legislative branch. Second, the government must move to implement policy proposals contained herein, such as to allow increased opportunity for sabbaticals from military service, with a subsequent return to service at a higher rank. Such a change must be accompanied by a lateral-entry model for senior leadership positions. Finally, the creation of a blind multivariate meritocracy through the implementation of an interagency personnel system promises to enhance the strategic-thinking nature of senior strategic leadership for the postmodern military.

If a nation full of ideal senior strategic leaders is not possible, a large number of highly talented individuals honed for contemporary leadership must be developed. Even in the light of postmodernism and the putative decline of the state, efforts to bolster the United States' political might still promise to best serve the interests of its people.

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